

Weekly Engineering Action Report

HVAC/BAS findings, recommended actions, and verification status.

BUILDING

Northlake Medical Office Building

SITE Northlake Medical Campus

REPORTING PERIOD

Sep 21–27, 2026

PREPARED FOR

North Controls LLC

Based on reviewed BAS evidence. Field verification required.

BUILDING PERFORMANCE REVIEW

Executive Summary

6

ACTIVE ISSUES

2

HIGH PRIORITY

Six issues remain active, including two high-priority chilled-water concerns. Continuing circulation, pump cycling, and air-side control concerns remain open. RTU-2 preoccupancy and VAV-214 zone-cooling concerns are new. AHU-3 field inspection identified a split static-pressure pickup tube. The tube was replaced and leak-checked. Reviewed follow-up trends show lower fan command with terminal airflow maintained, supporting verified improvement. AHU-2 temperature-input correction was also followed by reviewed improvement, but the preserved field temperature readings require further review. Detailed verification limits and remaining checks accompany each finding.

Potential excess circulation and unstable water delivery

The CHW Loop had elevated flow with a small temperature rise, but required flow remains unconfirmed. CHW-P-2 command and feedback cycled as loop pressure varied. Local speed response and the cycling cause remain unverified.

Why it matters: Excess circulation could increase pumping demand. Speed cycling may make water delivery less stable and add unnecessary drive modulation.

Explore findings [CHW Loop · I-001 · p. 5](#) [CHW-P-2 · I-004 · p. 7](#)

Potential unnecessary cooling and reheating

AHU-1 cooling commands overlapped downstream electric reheat commands. Actual heating and cooling remain unconfirmed, and zone demand or intended sequence exceptions may justify the overlap.

Why it matters: If physical cooling and reheating are confirmed without a justified need, the overlap could cause avoidable energy use.

Explore findings [AHU-1 · I-002 · p. 6](#)

Potential inconsistent temperature control

AHU-3 discharge temperature departed above and below setpoint, with control applicability unverified. Synthetic VAV-214 data showed a zone above its cooling target with high damper command, not confirmed position or airflow.

Why it matters: Persistent discharge temperature departures could make air conditioning less consistent. The VAV-214 pattern could indicate a cooling-comfort concern if confirmed in the field.

Explore findings [AHU-3 · I-005 · p. 8](#) [VAV-214 · I-008 · p. 10](#)

Follow-through this period

[Priorities and next steps · p. 3](#)**2** Newly identified**2** Field work recorded**0** Awaiting verification**2** Verified improved

ANALYSIS SCOPE AND FIELD CONFIRMATION

Conclusions are based on available BAS data and reviewed evidence. They do not alone confirm physical equipment condition or completed corrective work. Qualified field personnel must verify conditions, applicable sequences, and site safety requirements before changes are made.

MANAGEMENT REPORT

Weekly Issue Queue

8 EVALUATED ISSUES

Reviewed issues, ordered by priority and lifecycle.

Issue and condition	Priority and state	Next step
I-001 · CHW Loop CHW Loop low delta-T with elevated flow Brief p. 5 · Field sheet p. 14	⚠ High · Continuing Field action recommended Evidence: Sep 17 – Sep 25 · 5 reviewed days	Validate loop measurements, boundaries and targets. If the pattern persists, compare pressure and each pump's speed before changing controls. Suggested lead: BAS / controls contractor Next site visit
I-004 · CHW-P-2 CHW-P-2 speed cycling with loop differential-pressure variation Brief p. 7 · Field sheet p. 15	⚠ High · Continuing Field action recommended Evidence: Sep 17 – Sep 25 · 4 reviewed days	Validate local speed and loop DP before changing tuning. If both agree with BAS, use synchronized trends to identify the cause and correct only what they show. Suggested lead: BAS / controls contractor Next site visit
I-003 · AHU-3 AHU-3 high fan speed command with low terminal damper commands	⚠ High Verified improved Evidence: Sep 17 – Sep 19 · 3 reviewed days	Continue monitoring under comparable operating conditions to confirm the result is sustained. Suggested lead: Mountvera monitoring
I-007 · RTU-2 RTU-2 preoccupancy enable without active stage commands Brief p. 9 · Field sheet p. 18	⌚ Medium · New Field action recommended Evidence: Sep 23 – Sep 23 · 1 reviewed day	Validate RTU-2 field operation and early-enable intent. Adjust the schedule, override, or start logic only if the early enable is not required. Suggested lead: BAS / controls contractor Scheduled controls or service review
I-008 · VAV-214 VAV-214 high damper command with zone above cooling target in synthetic data Brief p. 10 · Field sheet p. 19	⌚ Medium · New Field action recommended Evidence: Sep 24 – Sep 24 · 1 reviewed day	Prove damper response first. If it tracks command, validate airflow and discharge-air temperature. Validate zone temperature and target before corrective work. Suggested lead: BAS / controls contractor Scheduled controls or service review

Occurrence days count reviewed evidence dates, not necessarily continuous fault duration. New issues were first detected in reviewed evidence this period; they may have begun earlier.

MANAGEMENT REPORT

Weekly Issue Queue

8 EVALUATED ISSUES

Reviewed issues, ordered by priority and lifecycle.

Issue and condition	Priority and state	Next step
I-002 · AHU-1 AHU-1 cooling command overlap with downstream reheat commands Brief p. 6 · Field sheet p. 16	 Medium · Continuing Field action recommended Evidence: Sep 17 – Sep 25 · 5 reviewed days	Verify physical response before changing controls. Compare targets and reheat requests with zone demand and approved exceptions. Correct only a verified gap. Suggested lead: BAS / controls contractor Scheduled controls or service review
I-005 · AHU-3 AHU-3 discharge air temperature departs from setpoint Brief p. 8 · Field sheet p. 17	 Medium · Continuing Field action recommended Evidence: Sep 17 – Sep 25 · 4 reviewed days	Validate discharge temperature first. Confirm fan operation, mode, and setpoint, then use the response to guide controls or delivered-air testing. Suggested lead: BAS / controls contractor Scheduled controls or service review
I-006 · AHU-2 AHU-2 mixed-air readings above both source-air temperatures	 Low Verified improved Evidence: Sep 17 – Sep 18 · 2 reviewed days	Continue monitoring under comparable operating conditions to confirm the result is sustained. Suggested lead: Mountvera monitoring

Occurrence days count reviewed evidence dates, not necessarily continuous fault duration. New issues were first detected in reviewed evidence this period; they may have begun earlier.

I-001 MANAGEMENT REPORT · FIELD DIAGNOSTIC BRIEF

CHW Loop low delta-T with elevated flow

A small return-to-supply temperature rise at elevated flow supports concern about excess circulation relative to heat transfer.



Priority	Status	Action Type	Confidence	Review Type
HIGH	ACTION RECOMMENDED	VERIFICATION	MODERATE	ON-SITE

ISSUE SUMMARY

The CHW Loop showed low delta-T with elevated flow, consistent with excess circulation relative to heat transfer. Return-to-supply delta-T averaged 4.9°F in each documented interval. Site operating requirements still need confirmation before the flow can be judged excessive for the load.

WHAT MOUNTVERA ESTABLISHED

OBSERVED CONDITION

The CHW Loop maintained a small return-to-supply temperature rise at elevated flow across the documented intervals. Average delta-T was 4.9°F in each interval, with average flow of 819 gpm in the first two intervals and 809 gpm in the latter two. Maximum flow was 838 gpm in each interval. These are individual-interval statistics, not whole-period averages. 4 documented intervals each lasted 390 minutes, totaling 1560 minutes.

PERSISTENCE

Observed on 5 site-local days from Sep 17, 2026 through Sep 25, 2026.

QUANTIFIED EVIDENCE

CHW return-to-supply delta-T averaged 4.8 degF while flow averaged 821 gpm during 385 qualifying minutes.

ENGINEERING INTERPRETATION

Elevated flow with a small temperature rise is consistent with circulation exceeding useful heat transfer. A differential-pressure target could sustain more circulation than the load requires, but the reviewed data did not establish the pressure or pump-speed response needed to support that explanation. Low thermal demand or biased temperature or flow readings could also produce this pattern.

PROBABLE CAUSE RANKING

- Differential-pressure control target sustaining excess circulation:** Pressure control could maintain more circulation than the load requires, producing elevated flow with a small return-to-supply temperature rise.
- Low thermal demand relative to loop circulation:** Low thermal demand relative to circulation could explain the small temperature rise at elevated flow.
- Temperature or flow measurement bias:** The interpretation depends on the difference between two temperature readings and the loop flow reading. Measurement bias could affect the apparent relationship.

WHAT REMAINS UNCONFIRMED

Measurement accuracy and a common loop measurement boundary are unverified. Required flow, expected delta-T, thermal load, and operating mode are not established. Pressure and separate pump-speed response patterns do not establish the cause. These limits prevent confirmation of excess circulation for the load. Energy use, cost, and effects on served conditions are not quantified.

CONTRACTOR FIELD CHECKS

- Validation: Compare CHW Loop supply and return temperatures and flow with calibrated field measurements.
- Mechanical/TAB: Confirm that the CHW Loop temperature and flow measurement locations represent the same loop boundary.
- Controls: If the pattern persists, compare CHW Loop differential pressure and its setpoint with separate CHW-P-1 and CHW-P-2 speed feedback during high flow before adjusting controls.
- Controls: Confirm documented CHW Loop flow and delta-T targets before changing pressure or pump control settings.
- Validation: Compare CHW Loop supply temperature with its setpoint during the low delta-T condition.

EXPECTED NORMAL BEHAVIOR

At comparable thermal demand, loop flow and return-to-supply delta-T meet site-approved operating requirements. Differential pressure and supply temperature remain controlled.

VERIFICATION PLAN

During comparable operation, trend CHW Loop supply and return temperatures, flow, differential pressure, and its setpoint. Record CHW-P-1 and CHW-P-2 speed feedback separately. Compare supply temperature with its setpoint. After any supported correction, confirm that flow matches the documented requirement and delta-T moves toward the approved operating target without loss of pressure or supply temperature control.

WHY IT MATTERS

Excess circulation relative to heat transfer could increase pumping demand and reduce chilled-water system efficiency.

SUPPORTING EVIDENCE

Latest reviewed occurrence: Sep 25, 2026 · 9:00 AM-3:25 PM CDT

Points Reviewed: CHW Loop CHWS Temp, CHW Loop CHWR Temp, CHW Loop CHW Flow, CHW Loop CHW DP, CHW Loop CHW DP SP, CHW-P-2 Pump Spd Fbk, CHW-P-1 Pump Spd Fbk

[Field action sheet · p. 14](#) [Appendix A-1](#) [Open report evidence](#)

I-002 MANAGEMENT REPORT · FIELD DIAGNOSTIC BRIEF


AHU-1 cooling command overlap with downstream reheat commands

Cooling and terminal reheat were requested together, but commands alone do not confirm simultaneous cooling and heating

Priority	Status	Action Type	Confidence	Review Type
MEDIUM	ACTION RECOMMENDED	VERIFICATION	MODERATE	ON-SITE

ISSUE SUMMARY

AHU-1 cooling command overlap with downstream electric reheat commands raises a control coordination concern. Interval averages were 68% for cooling valve command and 42% for each terminal's reheat command. Actual cooling and heating remain unconfirmed. Zone demand or approved sequence exceptions may justify the overlap, so a control fault is not established.

WHAT MOUNTVERA ESTABLISHED

OBSERVED CONDITION

AHU-1 cooling valve command overlapped electric reheat commands at VAV-101 and VAV-103. In each documented interval, cooling valve command averaged 68% and the applicable terminal reheat command averaged 42%. These are interval-specific averages, not full-window averages. 4 documented intervals each lasted 180 minutes, totaling 720 minutes.

PERSISTENCE

Observed on 5 site-local days from Sep 17, 2026 through Sep 25, 2026.

QUANTIFIED EVIDENCE

AHU cooling overlapped elevated downstream reheat for 350 qualifying point-minutes (overlaps count per point) across 2 downstream point(s).

ENGINEERING INTERPRETATION

The overlap shows simultaneous cooling and reheat control requests, not physical cooling and heating. A supply air target that does not reflect terminal demand could request unnecessary reheat. Legitimate zone demand or approved sequence exceptions could also explain the overlap. The command relationship alone does not distinguish these possibilities.

PROBABLE CAUSE RANKING

- Supply air target and terminal reheat command coordination:** The cooling valve command overlaps both terminal reheat commands. A supply air target that does not reflect terminal demand could explain these requests.
- Intended terminal reheat command for zone demand:** AHU cooling requests can coexist with legitimate terminal reheat requests when zone demand or approved sequence exceptions justify them.
- Electric reheat command override or demand logic mismatch:** Elevated reheat commands during AHU cooling requests could reflect an override or terminal demand logic mismatch.

WHAT REMAINS UNCONFIRMED

The reviewed data did not establish delivered temperatures, active targets, corresponding zone demand, or physical valve and heater response. These gaps prevent distinguishing a coordination mismatch from justified reheat. Overrides and demand logic mismatches are not documented. The commands do not establish actual energy use or a comfort impact.

CONTRACTOR FIELD CHECKS

- Mechanical:** Compare VAV-101 and VAV-103 electric reheat commands with heater current and measured air temperature rise.
- Mechanical:** Compare AHU-1 cooling valve command with valve travel and measured air temperature across the cooling coil.
- Controls:** Compare AHU-1 discharge air temperature with its setpoint while cooling and reheat commands overlap.
- Controls:** Trace VAV-101 and VAV-103 reheat requests to their demand logic, overrides, and approved sequence.
- Validation:** Measure corresponding zone conditions during reheat command overlap to confirm whether demand justifies it.

EXPECTED NORMAL BEHAVIOR

Cooling valve and terminal reheat commands should follow documented demand and approved sequence intent. Reheat commands should stay low during coordinated cooling unless zone demand or sequence exceptions justify them. Physical valve and heater response should agree with commands.

VERIFICATION PLAN

During comparable operation, trend AHU-1 cooling valve command, both electric reheat commands, and AHU-1 discharge air temperature with its setpoint. Record valve travel, heater current, and corresponding zone demand. Confirm that physical response agrees with commands and that reheat command overlap occurs only for documented demand or approved sequence exceptions.

WHY IT MATTERS

Unjustified overlap could cause avoidable energy use if physical cooling and reheating are confirmed.

SUPPORTING EVIDENCE

Reviewed evidence window: Sep 25, 2026 · 12:00 PM-2:55 PM CDT

Points Reviewed: AHU-1 Cooling Coil Clg Coil Vlv Cmd, VAV-103 Reheat Coil Elec Heat Cmd, VAV-101 Reheat Coil Elec Heat Cmd

[Field action sheet · p. 16](#) [Appendix A-2](#) [Open report evidence](#)

I-004 MANAGEMENT REPORT · FIELD DIAGNOSTIC BRIEF

CHW-P-2 speed cycling with loop differential-pressure variation

Speed feedback closely followed the cycling command while shared loop pressure varied relative to setpoint



Priority	Status	Action Type	Confidence	Review Type
HIGH	ACTION RECOMMENDED	VERIFICATION	MODERATE	ON-SITE

ISSUE SUMMARY

CHW-P-2 speed command and feedback cycled while shared chilled-water loop differential pressure varied relative to setpoint. Documented command swings included 38 percentage points. Close average command-to-feedback tracking supports a control or loop-side concern rather than a persistent speed-tracking discrepancy.

WHAT MOUNTVERA ESTABLISHED

OBSERVED CONDITION

CHW-P-2 command and feedback cycled as shared loop differential pressure and its setpoint varied. 3 documented intervals lasted 255 to 655 minutes, totaling 1565 minutes. The two 655-minute intervals each had command swings of 38 percentage points, with DP-error swings of 9.740 psi and 9.690 psi and average tracking errors of 1.0 and 1.2 percentage points, respectively. The 255-minute interval had a command swing of 37 percentage points, a DP-error swing of 9.670 psi and an average tracking error of 0.8 percentage points. These intervals contain the cycling pattern and do not establish uninterrupted cycling at every sample.

PERSISTENCE

Observed on 4 site-local days from Sep 17, 2026 through Sep 25, 2026.

QUANTIFIED EVIDENCE

CHW-P-2 Pump Spd Cmd ranged from 41.08 to 78.8 percent over the full prepared chart window (including context padding).

ENGINEERING INTERPRETATION

Feedback closely following the command makes a persistent VFD speed-tracking discrepancy less supported than a control or loop-side disturbance. Changes in DP error and setpoint could drive speed adjustments, or the control response could sustain cycling. The reviewed data did not establish the timing needed to distinguish these responses from changing hydraulic demand or pump-control interaction.

PROBABLE CAUSE RANKING

- DP-control tuning or response that sustains speed cycling:** The speed command cycles with loop DP error, and feedback closely follows the command. This relationship could reflect a control response that sustains cycling.
- Changing hydraulic demand or interaction between pump controls:** Changes in shared loop DP could drive repeated speed-command adjustments. Hydraulic demand or interaction with CHW-P-1 controls could contribute.
- DP setpoint changes that provoke repeated speed adjustments:** The shared loop setpoint varied during the observed pattern. Setpoint changes could drive speed adjustments rather than tuning-related cycling.
- Loop DP measurement instability or scaling discrepancy:** An unstable or incorrectly scaled DP reading could provoke command cycling that speed feedback follows.

WHAT REMAINS UNCONFIRMED

Local speed response and DP measurement accuracy remain unverified. Control tuning, response timing, setpoint-reset logic and changing hydraulic demand are not established, so the initiating cause cannot yet be distinguished. The reviewed data did not establish CHW-P-1 behavior or pump-control interaction. Reduced cooling service, energy waste and equipment damage are not established.

CONTRACTOR FIELD CHECKS

- Compare CHW-P-2 BAS speed command and feedback with local VFD speed while measuring CHW Loop differential pressure. Validate local speed response before changing tuning.
- Mechanical/TAB: Compare CHW Loop BAS differential pressure with a calibrated field measurement during CHW-P-2 cycling. Validate the DP signal before changing tuning.
- Controls: If local speed and measured DP agree with BAS, check the speed-control sequence and tuning against synchronized loop DP error and setpoint changes during cycling.
- Controls: Trend CHW-P-1 command, speed feedback and status alongside CHW-P-2 and loop DP to test for pump-control interaction.
- Record CHW Loop flow with DP, DP setpoint and CHW-P-2 speed to test for changing hydraulic demand.

EXPECTED NORMAL BEHAVIOR

Under steady demand, CHW-P-2 speed feedback should follow its command without sustained cyclic variation. Shared loop differential pressure should settle toward its active setpoint after operating changes.

VERIFICATION PLAN

During comparable operation, trend CHW-P-2 command, feedback and status with loop DP and setpoint. Validate speed locally and DP with a calibrated measurement. Include CHW-P-1 command, feedback and status and loop flow. Confirm reduced cyclic speed and DP-error variation under comparable demand, feedback tracking command and measured DP settling toward its active setpoint. Compare loop flow before and after correction to check for reduced delivery.

WHY IT MATTERS

Speed cycling may destabilize water delivery and add avoidable drive modulation.

SUPPORTING EVIDENCE

Reviewed evidence window: Sep 25, 2026 · 9:30 AM-2:40 PM CDT

Points Reviewed: CHW-P-2 Pump Spd Cmd, CHW-P-2 Pump Spd Fbk, CHW Loop CHW DP, CHW Loop CHW DP SP, CHW-P-2 Pump Sts

[Field action sheet · p. 15](#) [Appendix A-5](#) [Open report evidence](#)

I-005 MANAGEMENT REPORT · FIELD DIAGNOSTIC BRIEF

AHU-3 discharge air temperature departs from setpoint

Departures occurred above and below setpoint, rather than showing a continuous warm-air condition



Priority	Status	Action Type	Confidence	Review Type
MEDIUM	ACTION RECOMMENDED	VERIFICATION	MODERATE	ON-SITE

ISSUE SUMMARY

AHU-3 has a discharge air temperature tracking concern. Representative discharge temperature was 62.1 °F against a measured setpoint of 55.0 °F, a departure of 7.1 °F above setpoint. Departures below setpoint were also recorded.

WHAT MOUNTVERA ESTABLISHED

OBSERVED CONDITION

AHU-3 discharge air temperature departed from its measured setpoint in both directions. Each evidence window reports a representative temperature of 62.1 °F against 55.0 °F, with signed deviation extrema of -6.1 °F and 7.1 °F. These measurements do not establish a continuous warm-air condition. The evidence windows span 815 minutes and contain 415 cumulative minutes of the observed condition. This does not establish uninterrupted operation.

PERSISTENCE

Observed on 4 site-local days from Sep 17, 2026 through Sep 25, 2026.

QUANTIFIED EVIDENCE

DAT was outside the 5 degF setpoint deadband for 160 qualifying minutes.

ENGINEERING INTERPRETATION

Departures above and below setpoint support a temperature tracking concern, not a cooling-only diagnosis. A control-response mismatch could explain the pattern, while departures in both directions make a fixed sensor bias a less complete explanation. The reviewed data did not establish whether temperature control was applicable during the departures.

PROBABLE CAUSE RANKING

- Discharge air temperature loop tuning or setpoint handling:** Departures above and below the measured setpoint could reflect a control-response mismatch involving loop tuning or active setpoint handling.
- Discharge air temperature sensor calibration or location:** Sensor calibration or location could affect the temperature comparison. Departures in both directions limit a fixed-bias explanation.
- Temperature-control applicability during operating-state transitions:** Operating-state transitions could affect whether the measured setpoint applies. Occupied mode and fan operation during the departures remain unverified.

WHAT REMAINS UNCONFIRMED

Sensor accuracy and location, loop output, active setpoint handling, occupied mode, and actual fan operation remain unverified. The reviewed data did not establish conditioning output or the physical cause of the departures. These limits prevent a cooling-only diagnosis. Occupied-space and energy impacts are not established.

CONTRACTOR FIELD CHECKS

- Validate AHU-3 discharge air temperature against a calibrated field reading at the BAS sensor location.
- Controls: Compare AHU-3 Fan Command with Fan Status and field fan operation during a temperature departure.
- Controls: Confirm AHU-3 Occupied Mode and the active discharge air temperature setpoint during a temperature departure.
- Controls: Check AHU-3 temperature-loop response against its active setpoint and documented sequence of operations during stable operation.
- Mechanical: Measure AHU-3 mixed and discharge air temperatures to confirm the delivered temperature response.

EXPECTED NORMAL BEHAVIOR

During stable operation with discharge air temperature control active, validated discharge air temperature should approach and remain near the active setpoint.

VERIFICATION PLAN

During comparable operation, trend AHU-3 Discharge Air Temperature and Discharge Air Temperature Setpoint with Occupied Mode, Fan Command, and Fan Status. Use Mixed Air Temperature and Return Air Temperature as validation context. Compare discharge temperature with a calibrated field reading. Confirm that the validated temperature approaches and remains near the active setpoint during stable, confirmed fan operation.

WHY IT MATTERS

Persistent discharge air temperature departures could reduce the consistency of delivered-air conditioning.

SUPPORTING EVIDENCE

Reviewed evidence window: Sep 25, 2026 · 10:05 AM-3:20 PM CDT

Points Reviewed: AHU-3 DAT, AHU-3 DAT SP

[Field action sheet · p. 17](#) [Appendix A-6](#) [Open report evidence](#)

I-007 MANAGEMENT REPORT · FIELD DIAGNOSTIC BRIEF

RTU-2 preoccupancy enable without active stage commands

Synthetic demonstration evidence shows unit command and proof active while Occupied Mode indicates unoccupied operation.



Priority	Status	Action Type	Confidence	Review Type
MEDIUM	ACTION RECOMMENDED	VERIFICATION	MODERATE	ON-SITE

ISSUE SUMMARY

RTU-2 showed preoccupancy runtime without active heating or cooling stage commands in synthetic demonstration evidence. Unit command and proof were active while Occupied Mode indicated unoccupied operation. This supports checking the early enable, but does not establish unnecessary runtime or a mechanical cause.

WHAT MOUNTVERA ESTABLISHED

OBSERVED CONDITION

RTU-2 Unit Command and Unit Status were active before occupancy while RTU-2 Occupied Mode indicated unoccupied operation. Cooling Stage Command and Heating Stage Command were inactive, showing no commanded staged demand. One documented interval lasted 120 minutes. These observations come from synthetic demonstration evidence, not confirmed field operation.

PERSISTENCE

Observed on 1 site-local day from Sep 23, 2026 through Sep 23, 2026.

QUANTIFIED EVIDENCE

RTU command and proof were active during unoccupied periods without staged demand for 120 qualifying minutes.

ENGINEERING INTERPRETATION

Active unit command and proof support preoccupancy runtime in the synthetic interval. Inactive stage commands indicate no commanded staged demand, not the absence of physical heating or cooling. Schedule timing, an intended early-start sequence, or an override could explain the early enable.

PROBABLE CAUSE RANKING

- Unit-enable schedule timing misalignment:** An enable schedule starting earlier than intended could explain active unit command and proof during unoccupied mode with inactive stage commands.
- Intended optimal-start or preoccupancy sequence:** A documented early-start sequence could justify the unit command before occupancy and make this normal operation.
- Active override or retained unit enable:** An override or retained enable could maintain the unit command during unoccupied mode without active stage commands.

WHAT REMAINS UNCONFIRMED

The reviewed data did not establish field operation, intended schedule timing, optimal-start configuration, recovery demand, override state, or command source. Actual heating and cooling operation remains unconfirmed. These gaps prevent determining whether the early enable is necessary or identifying a mechanical cause. Energy use and comfort impact are not quantified.

CONTRACTOR FIELD CHECKS

- Controls: Trace RTU-2's preoccupancy unit command. Compare its source and timing with the intended schedule and start logic.
- Controls: Check RTU-2 for active overrides or retained enables while Occupied Mode indicates unoccupied operation.
- Mechanical: Validate the synthetic operating pattern by comparing RTU-2 Unit Command and Unit Status with observed preoccupancy operation before changes.
- Controls: Compare heating and cooling stage commands with actual stage operation during the early unit enable.
- Controls: Adjust the schedule, override, or start logic only after field validation and only if the early enable is not required.

EXPECTED NORMAL BEHAVIOR

Unit command and proof should follow the intended occupancy schedule and documented early-start requirements. Heating and cooling stage commands should reflect the documented demand sequence.

VERIFICATION PLAN

During comparable preoccupancy operation, trend RTU-2 Unit Command, Unit Status, Occupied Mode, Cooling Stage Command, and Heating Stage Command. Include Zone RTU-2 Zone Temperature and Zone Temperature Setpoint to assess recovery demand. Confirm actual unit and stage operation. Confirm that command and proof follow the documented schedule or justified early-start intent, with no unexplained preoccupancy enable.

WHY IT MATTERS

If the early runtime is not required, it could add avoidable energy use and operating hours.

SUPPORTING EVIDENCE

Latest reviewed occurrence: Sep 23, 2026 · 5:00 AM-7:00 AM CDT

Points Reviewed: RTU-2 Unit Cmd, RTU-2 Unit Sts, RTU-2 Occ Mode, Zone RTU-2 Zone Temp, Zone RTU-2 Zone Temp SP, RTU-2 Clg Stg Cmd, RTU-2 Htg Stg Cmd, RTU-2 DAT

[Field action sheet · p. 18](#) [Appendix A-9](#) [Open report evidence](#)

I-008 MANAGEMENT REPORT · FIELD DIAGNOSTIC BRIEF

VAV-214 high damper command with zone above cooling target in synthetic data



The command indicates cooling demand, but actual damper response and delivered airflow remain unconfirmed.

Priority	Status	Action Type	Confidence	Review Type
MEDIUM	ACTION RECOMMENDED	VERIFICATION	MODERATE	ON-SITE

ISSUE SUMMARY

Synthetic data shows VAV-214 at a high damper command while its served zone remained above the measured cooling target. Damper command averaged 92%, and zone temperature was 3.9 to 4.6°F above setpoint. This demonstrates an operating pattern, not a confirmed field condition.

WHAT MOUNTVERA ESTABLISHED

OBSERVED CONDITION

High VAV-214 damper command coincided with Zone VAV-214 temperature remaining above its measured cooling setpoint in the synthetic data. Command averaged 92%, with a zone temperature deviation of 3.9 to 4.6°F. The representative zone temperature was 78.6°F against a 74.0°F cooling target. One documented interval lasted 325 minutes. These observations do not establish actual damper movement or airflow.

PERSISTENCE

Observed on 1 site-local day from Sep 24, 2026 through Sep 24, 2026.

QUANTIFIED EVIDENCE

Damper was above 90% while zone temperature remained above target for 325 qualifying minutes.

ENGINEERING INTERPRETATION

The high command indicates cooling control intent without the expected zone temperature recovery. This relationship is consistent with insufficient delivered cooling or a sensor or active-target discrepancy. Command alone does not establish blade position or airflow. If both respond as expected, discharge-air conditions could explain the warm zone.

PROBABLE CAUSE RANKING

- Airflow delivery limitation despite high damper command:** High damper command with a warm served zone could reflect limited delivered airflow. The reviewed data did not establish airflow or its relationship to the airflow setpoint.
- Damper command-to-position response mismatch:** Actuator or linkage response could prevent actual blade position from following the high command. Command alone does not confirm physical damper operation.
- Insufficient discharge-air cooling during high damper command:** If blade position and airflow respond to command, discharge-air conditions could explain the warm zone. Discharge-air temperature needs field validation.
- Zone temperature bias or active-target mismatch:** Sensor bias or unresolved active-target context could explain the measured temperature deviation and high command. Sensor accuracy, operating mode and occupancy remain unverified.

WHAT REMAINS UNCONFIRMED

Synthetic data does not establish an actual site condition or impact. Actual blade response, airflow delivery, discharge-air conditions, sensor accuracy, operating mode, occupancy and active-target context remain unverified, limiting cause selection. No occupant complaint, measured energy impact or verified equipment defect is documented.

CONTRACTOR FIELD CHECKS

- Mechanical:** Compare VAV-214 damper command with actual blade position and check actuator and linkage travel.
- Mechanical/TAB:** Measure VAV-214 airflow during high damper command. Compare it with VAV-214 Airflow Setpoint and check the airflow pickup and tubing against the field measurement.
- Mechanical:** Measure VAV-214 Discharge Air Temperature during high damper command to assess delivered cooling.
- Controls:** Validate Zone VAV-214 Zone Temperature with a calibrated field reading during high damper command.
- Controls:** Confirm Zone VAV-214 cooling and heating setpoints and occupancy status during high damper command.

EXPECTED NORMAL BEHAVIOR

Damper command should correspond to actual blade response. Adequate delivered airflow and discharge-air conditions should help Zone VAV-214 recover toward its active cooling setpoint.

VERIFICATION PLAN

During comparable cooling demand, trend VAV-214 damper command, airflow, airflow setpoint and discharge-air temperature with zone temperature and cooling setpoint. Confirm blade response by field observation and establish the active target and occupancy context. Confirm improvement through blade response matching command, measured airflow following its active target, and delivered air supporting zone recovery toward the cooling target.

WHY IT MATTERS

If confirmed in the field, a zone remaining above its cooling target despite high damper command could indicate a cooling-comfort concern.

SUPPORTING EVIDENCE

Latest reviewed occurrence: Sep 24, 2026 · 11:00 AM-4:25 PM CDT

Points Reviewed: Zone VAV-214 Zone Temp, VAV-214 Dmpr Cmd, Zone VAV-214 Clg SP

[Field action sheet · p. 19](#) [Appendix A-10](#) [Open report evidence](#)

MANAGEMENT REPORT · IMPROVEMENT AND FOLLOW-UP STATUS

Verification Update

Follow-up review of reported items and observed improvements in operation.

2

Verified this period

0

Verification pending

0

Reopened

2

Continue monitoring

I-003 / AHU-3

HIGH

VERIFIED IMPROVED

AHU-3 high fan speed command with low terminal damper commands

VERIFICATION SUMMARY

AHU-3 fan speed command averaged 92% while terminal damper commands averaged 24%, supporting a controls investigation rather than a confirmed pressure-reset fault. A subsequent staff-transcribed synthetic field report documented a split pressure pickup tube and leaking fitting. The tube was replaced and fittings secured. Mountvera-reviewed trends supported improvement, but did not prove repair causality.

→ Before

AHU-3 · Supply Fan Speed	92.02 %
VAV-301 · Damper Command	24.05 %
VAV-301 · Airflow	720.98 cfm
VAV-301 · Airflow Setpoint	700 cfm

Sample mean · n=78

The AHU fan speed command remained near maximum while most downstream VAV dampers were low and measured airflow met setpoint, consistent with an excessive static-pressure or fan-control demand signature.

→ After

AHU-3 · Supply Fan Speed	57.12 %
VAV-301 · Damper Command	42.04 %
VAV-301 · Airflow	704.87 cfm
VAV-301 · Airflow Setpoint	700 cfm

Sample mean · n=360

Analyst-reviewed outcome: improved. This chart shows one saved post-action comparison window; reviewed before/after metrics cover the saved eligible operating samples. Comparability: comparable with limitations.



Improved behavior observed

Reviewed comparable evidence supports a verified-improved disposition.

MONITORING & FOLLOW-UP

Confirm command against measured fan speed during comparable low terminal demand. If they agree, trace the command source, limits, overrides and terminal-demand reset logic. Use the completed pressure pickup repair and spot validation as the baseline for remaining pressure checks where available. Confirm Occupied Mode and approved ventilation requirements before testing a lower command. Resolve remaining terminal damper and airflow discrepancies with mechanical/TAB checks. Continue monitoring under comparable operating conditions to confirm the result is sustained.

COMPARISON LIMITATIONS

Synthetic demonstration only. Boundary-day normal samples precede recorded work completion; the CSV does not model an exact intraday repair response. Mechanical condition, direct VFD speed, static pressure, observed damper position and functional checks are field-return statements, not continuous trend telemetry. Follow-up windows differ in day count; means use available occupied/fan-running samples, exclude unoccupied/stopped operation, and do not quantify energy savings or prove a unique root cause. Sunday 2026-09-27 has zero occupied/fan-running samples and supplies no positive verification evidence. Extra BLDG OAT columns in AHU-2/AHU-3 remain unmapped; the approved building OAT is sourced from the AHU-1 export. All required comparison points are present, with no sample truncation. Context-generated chart point selectors omit cross-asset points, so explicit building-scoped point IDs were used for the comparison. The deterministic rule evaluated all seven served VAVs; VAV-301 metrics are only the disclosed example. Fan command is not measured fan speed. The Sunday rule result is insufficient_data.

SUPPORTING EVIDENCE

Trend window: 2026-09-26 14:00 to 2026-09-26 20:30 UTC

Points reviewed: AHU-3 Fan Sts, AHU-3 Occ Mode, AHU-3 SF Spd Cmd, VAV-301 Airflow, VAV-301 Airflow SP, VAV-301 Dmpr Cmd

[Interactive verification evidence · A-4](#)



MANAGEMENT REPORT · IMPROVEMENT AND FOLLOW-UP STATUS

Verification Update

Follow-up review of reported items and observed improvements in operation.

2

Verified this period

0

Verification pending

0

Reopened

2

Continue monitoring

I-006 / AHU-2

LOW

VERIFIED IMPROVED

AHU-2 mixed-air readings above both source-air temperatures

VERIFICATION SUMMARY

AHU-2 mixed-air readings were above both source-air readings, with representative values of 87.3°F and 87.6°F during outside-air damper commands. The baseline investigation favored validating the measurement before assigning a damper fault. Subsequent staff-transcribed demonstration findings reported a cabinet-temperature source mapped to the BAS mixed-air input and correction to the existing mixed-air probe.

→ BeforeMAT distance outside simultaneous OAT/RAT bounds **8.03 °F**

Sample mean · n=60

Mixed air temperature exceeded the outside/return air temperature bounds including tolerance while the outside-air damper command met the screening threshold. Actual damper position was not confirmed.

→ AfterMAT distance outside simultaneous OAT/RAT bounds **0.01 °F**

Sample mean · n=234

Analyst-reviewed outcome: improved. This chart shows one saved post-action comparison window; reviewed before/after metrics cover the saved eligible operating samples. Comparability: comparable with limitations.

**Improved behavior observed**

Reviewed comparable evidence supports a verified-improved disposition.

MONITORING & FOLLOW-UP

Resolve the remaining low mixed-air discrepancy by validating the existing probe reading and BAS input source against a calibrated air traverse during comparable damper commands. Confirm source-air sensor accuracy, representativeness and measurement consistency before changing controls or replacing components. Compare command with observed blade position during that validation, recognizing that reported travel testing is already complete.

Continue monitoring under comparable operating conditions to confirm the result is sustained.

COMPARISON LIMITATIONS

Synthetic demonstration only. Boundary-day normal samples precede recorded work completion; the CSV does not model an exact intraday repair response. Mechanical condition, direct VFD speed, static pressure, observed damper position and functional checks are field-return statements, not continuous trend telemetry. Follow-up windows differ in day count; means use available occupied/fan-running samples, exclude unoccupied/stopped operation, and do not quantify energy savings or prove a unique root cause. Sunday 2026-09-27 has zero occupied/fan-running samples and supplies no positive verification evidence. Extra BLDG OAT columns in AHU-2/AHU-3 remain unmapped; the approved building OAT is sourced from the AHU-1 export. All required comparison points are present, with no sample truncation. Context-generated chart point selectors omit cross-asset points, so explicit building-scoped point IDs were used for the comparison. The preserved field functional-check readings remain MAT 69.21 degF, OAT 77.67 degF, RAT 73.85 degF; MAT is 4.64 degF below both source temperatures. The field check remains Further review needed. The packet uses the AHU-2 CSV OAT and reports 8.03 to 0.01 degF; the normalized application uses approved AHU-1 building OAT and reports 8.05 to 0.01 degF for the same 60 baseline/234 post-action occupied-running timestamps. Maximum post-action distance outside exact bounds is 0.37 degF, so exact containment at every timestamp is not asserted. The rule uses a tolerance and can pass on unoccupied/stopped Sunday; that pass is not eligible verification evidence. Earlier and work-boundary normal samples prevent an exclusive-causation claim.

SUPPORTING EVIDENCE

Trend window: 2026-09-26 13:30 to 2026-09-26 18:30 UTC

Points reviewed: AHU-2 Fan Sts, AHU-2 MAT, AHU-2 Occ Mode, AHU-2 RAT, AHU-2 Outside Air Damper Dmpr Pos Cmd, Northlake Medical Office Building OAT

[Interactive verification evidence · A-8](#)



ASSIGNMENT & SCHEDULING OVERVIEW

Field Action Pack

Plan follow-up: Primary and support roles are Mountvera recommendations unless marked contractor-reported or analyst-assigned. Schedule with the primary and coordinate support. Return completed sheets for Mountvera review.

6
FOLLOW-UP ITEMS

6
BAS / CONTROLS
INVOLVEMENT
actions

6
MECHANICAL INVOLVEMENT
actions

Counts include primary and support. Both disciplines: 6; other responsible parties: 0. Assignments take precedence.

Prioritized follow-up work

1	CHW Loop · CHW Loop low delta-T with elevated flow Timing: Next site visit Page 14 · I-001	PRIMARY Controls contractor SUPPORT Mechanical contractor · TAB
2	CHW-P-2 · CHW-P-2 speed cycling with loop differential-pressure variation Timing: Next site visit Page 15 · I-004	PRIMARY Controls contractor SUPPORT Mechanical contractor · TAB
3	AHU-1 · AHU-1 cooling command overlap with downstream reheat commands Timing: Scheduled controls or service review Page 16 · I-002	PRIMARY Controls contractor SUPPORT Mechanical contractor
4	AHU-3 · AHU-3 discharge air temperature departs from setpoint Timing: Scheduled controls or service review Page 17 · I-005	PRIMARY Controls contractor SUPPORT Mechanical contractor
5	RTU-2 · RTU-2 preoccupancy enable without active stage commands Timing: Scheduled controls or service review Page 18 · I-007	PRIMARY Controls contractor SUPPORT Mechanical contractor
6	VAV-214 · VAV-214 high damper command with zone above cooling target in synthetic data Timing: Scheduled controls or service review Page 19 · I-008	PRIMARY Controls contractor SUPPORT Mechanical contractor · TAB

Coordination Notes

BAS / controls and mechanical contractors should coordinate measurement validation and synchronized loop and pump trends at the next site visit. Follow the field action plan for scheduled air-side checks and continued monitoring.

Mountvera Follow-Up

Mountvera will review the next applicable trend window after reported field action and update verification status when comparable evidence is available.

PRIORITY1

FIELD ACTION PACK · MOUNTVERA FIELD RECORD · I-001 | CHW LOOP

CHW Loop low delta-T with elevated flow

RESPONSE CODEMV-911522-V1-I-001-107344

BUILDING Northlake Medical Office Building		FIELD LOCATION / SERVING AREA Confirm location on site		SEVERITY High		TIMING Next site visit		
PRIMARY · RECOMMENDED Controls contractor Support: Mechanical contractor · TAB			ACTION TYPE Field verification			RELATED REFERENCES Issue brief p. 5 · A-1 p. 22		
WHY THIS WAS ISSUED The CHW Loop showed low delta-T with elevated flow, consistent with excess circulation relative to heat transfer. Return-to-supply delta-T averaged 4.9°F in each documented interval. Site operating requirements still need confirmation before the flow can be judged excessive for the load.				EXPECTED NORMAL BEHAVIOR At comparable thermal demand, loop flow and return-to-supply delta-T meet site-approved operating requirements. Differential pressure and supply temperature remain controlled.				
RECOMMENDED FIELD ACTION Validate the CHW Loop temperature and flow measurements first. Confirm the measurement boundary and documented operating targets. If the pattern persists, compare loop differential pressure and its setpoint with separate speed feedback from CHW-P-1 and CHW-P-2 before adjusting controls. Compare supply temperature with its setpoint during the low delta-T condition.								
1 · BEFORE CHANGING ANYTHING								
CHECK				NORMAL	ABNORMAL	NOT CHECKED	UNABLE	NOTE / READING
1. Validation: Compare CHW Loop supply and return temperatures and flow with calibrated field measurements.				☐	☐	☐	☐	
2. Mechanical/TAB: Confirm that the CHW Loop temperature and flow measurement locations represent the same loop boundary.				☐	☐	☐	☐	
3. Controls: If the pattern persists, compare CHW Loop differential pressure and its setpoint with separate CHW-P-1 and CHW-P-2 speed feedback during high flow before adjusting controls.				☐	☐	☐	☐	
4. Controls: Confirm documented CHW Loop flow and delta-T targets before changing pressure or pump control settings.				☐	☐	☐	☐	
5. Validation: Compare CHW Loop supply temperature with its setpoint during the low delta-T condition.				☐	☐	☐	☐	
2 · OBSERVATION AND READINGS				3 · ACTUAL WORK PERFORMED				
ITEM	BEFORE	AFTER	UNIT	SOURCE / TIME / TERMINAL ID				
CHW supply temperature			degF					
CHW return temperature			degF					
Measured CHW loop flow			gpm					
Return minus supply delta-T			degF					
CHW differential pressure			psi					
CHW DP setpoint			psi					
OBSERVED				COMPLETE FIRST				
☐ Confirmed as reported				☐ Completed as recommended				
☐ Different condition found				☐ Completed with change				
☐ Not confirmed				☐ No action taken				
☐ Unable to verify				☐ Unable				
☐ Declined				TICKET #				
				OBSERVATION DATE / TIME				
				WORK-START DATE / TIME				
				COMPLETION DATE / TIME				
				YYYY-MM-DD HH:mm · America/Chicago (local)				
4 · POST-WORK FUNCTIONAL CHECK AND FOLLOW-UP				DISPOSITION				
Under comparable load, record CHW flow, supply/return temperatures, and differential pressure before and after work.				☐ Completed as recommended				
FUNCTIONAL CHECK				☐ Completed with change				
☐ Pass				☐ No action taken				
☐ Fail				☐ Unable				
☐ Not performed				☐ Deferred				
☐ Further review needed				☐ Declined				
FOLLOW-UP NEEDS				ACTION CATEGORIES				
☐ Parts / quote				☐ Controls adjustment				
☐ Return visit				☐ Mechanical repair				
☐ Mechanical review				☐ Setting change				
☐ Mountvera trend verification				☐ Component replacement				
☐ Other				WORK PERFORMED				
				NOTES / UNRESOLVED QUESTIONS				
Contractor functional check only. Mountvera trend verification remains pending before this Issue can be recorded as improved or resolved.				Return the completed sheet to reports@mountvera.com with the response code in the subject line.				

Sample Report · mountvera.com | Verified Building Performance | Approved Report | MV-9115221CFC00 · v1

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PRIORITY2

FIELD ACTION PACK · MOUNTVERA FIELD RECORD · I-004 | CHW-P-2

CHW-P-2 speed cycling with loop differential-pressure variation

RESPONSE CODEMV-911522-V1-I-004-23E155

BUILDING Northlake Medical Office Building		FIELD LOCATION / SERVING AREA Confirm location on site		SEVERITY High		TIMING Next site visit				
PRIMARY · RECOMMENDED Controls contractor Support: Mechanical contractor · TAB			ACTION TYPE Field verification			RELATED REFERENCES Issue brief p. 7 · A-5 p. 26				
WHY THIS WAS ISSUED CHW-P-2 speed command and feedback cycled while shared chilled-water loop differential pressure varied relative to setpoint. Documented command swings included 38 percentage points. Close average command-to-feedback tracking supports a control or loop-side concern rather than a persistent speed-tracking discrepancy.				EXPECTED NORMAL BEHAVIOR Under steady demand, CHW-P-2 speed feedback should follow its command without sustained cyclic variation. Shared loop differential pressure should settle toward its active setpoint after operating changes.						
RECOMMENDED FIELD ACTION Validate local speed response and the loop DP signal before changing tuning. If both agree with BAS, use synchronized trends to distinguish control response from setpoint changes, hydraulic demand and pump-control interaction. Correct only the cause supported by those checks.										
1 · BEFORE CHANGING ANYTHING										
CHECK					NORMAL	ABNORMAL	NOT CHECKED	UNABLE	NOTE / READING	
Compare CHW-P-2 BAS speed command and feedback with local VFD 1. speed while measuring CHW Loop differential pressure. Validate local speed response before changing tuning.					☐	☐	☐	☐		
Mechanical/TAB: Compare CHW Loop BAS differential pressure with a 2. calibrated field measurement during CHW-P-2 cycling. Validate the DP signal before changing tuning.					☐	☐	☐	☐		
Controls: If local speed and measured DP agree with BAS, check the 3. speed-control sequence and tuning against synchronized loop DP error and setpoint changes during cycling.					☐	☐	☐	☐		
Controls: Trend CHW-P-1 command, speed feedback and status alongside 4. CHW-P-2 and loop DP to test for pump-control interaction.					☐	☐	☐	☐		
Record CHW Loop flow with DP, DP setpoint and CHW-P-2 speed to test 5. for changing hydraulic demand.					☐	☐	☐	☐		
2 · OBSERVATION AND READINGS					3 · ACTUAL WORK PERFORMED					
ITEM	BEFORE	AFTER	UNIT	SOURCE / TIME / TERMINAL ID	COMPLETE FIRST TECHNICIAN INITIALS				CONTRACTOR NAME	
Pump speed command			%							
Actual pump VFD speed			%		TICKET #				OBSERVATION DATE / TIME	
Loop differential pressure			psi		WORK-START DATE / TIME				COMPLETION DATE / TIME	
Loop DP setpoint			psi		YYYY-MM-DD HH:mm · America/Chicago (local)					
Measured loop flow			gpm		DISPOSITION					
Number of running pumps			count		☐ Completed as recommended				☐ Completed with change	
OBSERVED					☐ No action taken				☐ Deferred	
☐ Confirmed as reported					☐ Unable				☐ Declined	
☐ Different condition found					ACTION CATEGORIES					
☐ Not confirmed					☐ Controls adjustment				☐ Mechanical repair	
☐ Unable to verify					☐ Setting change				☐ Component replacement	
☐ Other					WORK PERFORMED					
4 · POST-WORK FUNCTIONAL CHECK AND FOLLOW-UP					NOTES / UNRESOLVED QUESTIONS					
Observe pump speed and loop differential pressure together through a comparable load change; record response and pump staging.										
FUNCTIONAL CHECK										
☐ Pass										
☐ Not performed										
☐ Fail										
☐ Further review needed										
FOLLOW-UP NEEDS										
☐ Parts / quote										
☐ Controls review										
☐ Mountvera trend verification										
Contractor functional check only. Mountvera trend verification remains pending before this issue can be recorded as improved or resolved.					Return the completed sheet to reports@mountvera.com with the response code in the subject line.					

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PRIORITY3

FIELD ACTION PACK · MOUNTVERA FIELD RECORD · I-002 | AHU-1

RESPONSE CODEMV-911522-V1-I-002-359DB0

BUILDING
Northlake Medical Office Building

FIELD LOCATION / SERVING AREA
Confirm location on site

SEVERITY
Medium

TIMING
Scheduled controls or service review

PRIMARY · RECOMMENDED
Controls contractor
Support: Mechanical contractor

ACTION TYPE
Field verification

RELATED REFERENCES
Issue brief p. 6 · A-2 p. 23

WHY THIS WAS ISSUED

AHU-1 cooling command overlap with downstream electric reheat commands raises a control coordination concern. Interval averages were 68% for cooling valve command and 42% for each terminal's reheat command. Actual cooling and heating remain unconfirmed. Zone demand or approved sequence exceptions may justify the overlap, so a control fault is not established.

EXPECTED NORMAL BEHAVIOR

Cooling valve and terminal reheat commands should follow documented demand and approved sequence intent. Reheat commands should stay low during coordinated cooling unless zone demand or sequence exceptions justify them. Physical valve and heater response should agree with commands.

RECOMMENDED FIELD ACTION

Verify command-versus-actual response before changing controls. Then compare the AHU discharge air target and terminal reheat requests with corresponding zone demand and approved sequence exceptions. Correct only a verified mismatch.

1 · BEFORE CHANGING ANYTHING

CHECK	NORMAL	ABNORMAL	NOT CHECKED	UNABLE	NOTE / READING
1. Mechanical: Compare VAV-101 and VAV-103 electric reheat commands with heater current and measured air temperature rise.	☐	☐	☐	☐	
2. Mechanical: Compare AHU-1 cooling valve command with valve travel and measured air temperature across the cooling coil.	☐	☐	☐	☐	
3. Controls: Compare AHU-1 discharge air temperature with its setpoint while cooling and reheat commands overlap.	☐	☐	☐	☐	
4. Controls: Trace VAV-101 and VAV-103 reheat requests to their demand logic, overrides, and approved sequence.	☐	☐	☐	☐	
5. Validation: Measure corresponding zone conditions during reheat command overlap to confirm whether demand justifies it.	☐	☐	☐	☐	

2 · OBSERVATION AND READINGS

ITEM	BEFORE	AFTER	UNIT	SOURCE / TIME / TERMINAL ID
AHU cooling-valve command			%	
AHU discharge temperature			degF	
AHU discharge-temp. setpoint			degF	
Representative VAV reheat command			%	
Same VAV physical reheat output			state	
Same VAV measured airflow			cfm	

OBSERVED

☐ Confirmed as reported

☐ Not confirmed

☐ Different condition found

☐ Unable to verify

3 · ACTUAL WORK PERFORMED

COMPLETE FIRST
TECHNICIAN INITIALS

CONTRACTOR NAME

TICKET #

OBSERVATION DATE / TIME

WORK-START DATE / TIME

COMPLETION DATE / TIME

YYYY-MM-DD HH:mm · America/Chicago (local)

DISPOSITION

☐ Completed as recommended

☐ Completed with change

☐ No action taken

☐ Deferred

☐ Unable

☐ Declined

ACTION CATEGORIES

☐ Controls adjustment

☐ Mechanical repair

☐ Setting change

☐ Component replacement

☐ Other

WORK PERFORMED

NOTES / UNRESOLVED QUESTIONS

4 · POST-WORK FUNCTIONAL CHECK AND FOLLOW-UP

Check AHU cooling and the identified downstream VAV's physical reheat response together; record airflow under comparable conditions.

FUNCTIONAL CHECK

☐ Pass

☐ Fail

☐ Not performed

☐ Further review needed

FOLLOW-UP NEEDS

☐ Parts / quote

☐ Return visit

☐ Controls review

☐ Mechanical review

☐ Mountvera trend verification

Contractor functional check only. Mountvera trend verification remains pending before this Issue can be recorded as improved or resolved.

Return the completed sheet to reports@mountvera.com with the response code in the subject line.



BUILDING Northlake Medical Office Building		FIELD LOCATION / SERVING AREA Confirm location on site		SEVERITY Medium		TIMING Scheduled controls or service review	
PRIMARY · RECOMMENDED Controls contractor Support: Mechanical contractor			ACTION TYPE Field verification			RELATED REFERENCES Issue brief p. 8 · A-6 p. 27	
WHY THIS WAS ISSUED AHU-3 has a discharge air temperature tracking concern. Representative discharge temperature was 62.1 °F against a measured setpoint of 55.0 °F, a departure of 7.1 °F above setpoint. Departures below setpoint were also recorded.				EXPECTED NORMAL BEHAVIOR During stable operation with discharge air temperature control active, validated discharge air temperature should approach and remain near the active setpoint.			
RECOMMENDED FIELD ACTION Validate the discharge air temperature measurement first. Then confirm fan operation, occupied mode, and the active setpoint during comparable departures. Use the confirmed temperature response to decide whether control-loop investigation or further delivered-air testing is needed.							
1 · BEFORE CHANGING ANYTHING							
CHECK					NORMAL	ABNORMAL	NOT CHECKED
					UNABLE	NOTE / READING	
1. Validate AHU-3 discharge air temperature against a calibrated field reading at the BAS sensor location.					☐	☐	☐
2. Controls: Compare AHU-3 Fan Command with Fan Status and field fan operation during a temperature departure.					☐	☐	☐
3. Controls: Confirm AHU-3 Occupied Mode and the active discharge air temperature setpoint during a temperature departure.					☐	☐	☐
4. Controls: Check AHU-3 temperature-loop response against its active setpoint and documented sequence of operations during stable operation.					☐	☐	☐
5. Mechanical: Measure AHU-3 mixed and discharge air temperatures to confirm the delivered temperature response.					☐	☐	☐
2 · OBSERVATION AND READINGS				3 · ACTUAL WORK PERFORMED			
ITEM	BEFORE	AFTER	UNIT	SOURCE / TIME / TERMINAL ID	COMPLETE FIRST		
Discharge temperature (BAS)			degF		TECHNICIAN INITIALS		
Discharge temperature (field)			degF		CONTRACTOR NAME		
Discharge-temperature setpoint			degF		TICKET #		
Cooling-valve command			%		OBSERVATION DATE / TIME		
Observed cooling-valve position			%		WORK-START DATE / TIME		
CHW supply temperature			degF		COMPLETION DATE / TIME		
OBSERVED				YYYY-MM-DD HH:mm · America/Chicago (local)			
☐ Confirmed as reported		☐ Not confirmed		DISPOSITION			
☐ Different condition found		☐ Unable to verify		☐ Completed as recommended			
				☐ Completed with change			
				☐ No action taken			
				☐ Deferred			
				☐ Unable			
				☐ Declined			
4 · POST-WORK FUNCTIONAL CHECK AND FOLLOW-UP				ACTION CATEGORIES			
Compare BAS and field discharge temperatures with setpoint, then record valve command and physical response after work.				☐ Controls adjustment			
				☐ Mechanical repair			
				☐ Setting change			
☐ Other				☐ Component replacement			
FUNCTIONAL CHECK				WORK PERFORMED			
☐ Pass		☐ Fail					
☐ Not performed		☐ Further review needed					
FOLLOW-UP NEEDS				NOTES / UNRESOLVED QUESTIONS			
☐ Parts / quote		☐ Return visit					
☐ Controls review		☐ Mechanical review					
☐ Mountvera trend verification							
Contractor functional check only. Mountvera trend verification remains pending before this issue can be recorded as improved or resolved.				Return the completed sheet to reports@mountvera.com with the response code in the subject line.			



BUILDING Northlake Medical Office Building		FIELD LOCATION / SERVING AREA Confirm location on site		SEVERITY Medium		TIMING Scheduled controls or service review	
PRIMARY · RECOMMENDED Controls contractor Support: Mechanical contractor			ACTION TYPE Field verification			RELATED REFERENCES Issue brief p. 9 · A-9 p. 30	
WHY THIS WAS ISSUED RTU-2 showed preoccupancy runtime without active heating or cooling stage commands in synthetic demonstration evidence. Unit command and proof were active while Occupied Mode indicated unoccupied operation. This supports checking the early enable, but does not establish unnecessary runtime or a mechanical cause.				EXPECTED NORMAL BEHAVIOR Unit command and proof should follow the intended occupancy schedule and documented early-start requirements. Heating and cooling stage commands should reflect the documented demand sequence.			
RECOMMENDED FIELD ACTION Validate the synthetic operating pattern against field operation before making changes. Identify the source and intended timing of RTU-2's preoccupancy unit command. Adjust the schedule, override, or start logic only if the early enable is not required.							
1 · BEFORE CHANGING ANYTHING							
CHECK					NORMAL	ABNORMAL	NOT CHECKED
1. Controls: Trace RTU-2's preoccupancy unit command. Compare its source and timing with the intended schedule and start logic.					☐	☐	☐
2. Controls: Check RTU-2 for active overrides or retained enables while Occupied Mode indicates unoccupied operation.					☐	☐	☐
3. Mechanical: Validate the synthetic operating pattern by comparing RTU-2 Unit Command and Unit Status with observed preoccupancy operation before changes.					☐	☐	☐
4. Controls: Compare heating and cooling stage commands with actual stage operation during the early unit enable.					☐	☐	☐
5. Controls: Adjust the schedule, override, or start logic only after field validation and only if the early enable is not required.					☐	☐	☐
2 · OBSERVATION AND READINGS				3 · ACTUAL WORK PERFORMED			
ITEM	BEFORE	AFTER	UNIT	SOURCE / TIME / TERMINAL ID			
Scheduled occupied start			local time				
Actual unit start			local time				
Optimum-start state / lead			min				
Unit command / status / occupied mode			-				
Zone temperature			degF				
Zone setpoint			degF				
OBSERVED ☐ Schedule/calendar mismatch ☐ Optimum start/purge active ☐ Override/priority active ☐ Authorized pre-start operation ☐ Condition not confirmed ☐ Unable to verify				COMPLETE FIRST TECHNICIAN INITIALS _____ CONTRACTOR NAME _____ TICKET # _____ OBSERVATION DATE / TIME _____ WORK-START DATE / TIME _____ COMPLETION DATE / TIME _____ YYYY-MM-DD HH:mm · America/Chicago (local)			
4 · POST-WORK FUNCTIONAL CHECK AND FOLLOW-UP Observe the next scheduled start and record command, status, occupied mode, zone temperature, and setpoint.				DISPOSITION ☐ Completed as recommended ☐ Completed with change ☐ No action taken ☐ Deferred ☐ Unable ☐ Declined			
FUNCTIONAL CHECK ☐ Pass ☐ Fail ☐ Not performed ☐ Further review needed				ACTION CATEGORIES ☐ Schedule/calendar adjusted ☐ Optimum-start logic tuned ☐ Override/priority released ☐ Documented as intended operation ☐ No action / deferred ☐ Other work performed			
FOLLOW-UP NEEDS ☐ Parts / quote ☐ Return visit ☐ Controls review ☐ Mechanical review ☐ Mountvera trend verification				WORK PERFORMED 			
Contractor functional check only. Mountvera trend verification remains pending before this Issue can be recorded as improved or resolved.				NOTES / UNRESOLVED QUESTIONS 			

Return the completed sheet to reports@mountvera.com with the response code in the subject line.



PRIORITY6

FIELD ACTION PACK · MOUNTVERA FIELD RECORD · I-008 | VAV-214
VAV-214 high damper command with zone
above cooling target in synthetic data

RESPONSE CODEMV-911522-V1-I-008-E49163

BUILDING Northlake Medical Office Building		FIELD LOCATION / SERVING AREA Confirm location on site		SEVERITY Medium		TIMING Scheduled controls or service review				
PRIMARY · RECOMMENDED Controls contractor Support: Mechanical contractor · TAB			ACTION TYPE Field verification			RELATED REFERENCES Issue brief p. 10 · A-10 p. 31				
WHY THIS WAS ISSUED Synthetic data shows VAV-214 at a high damper command while its serving zone remained above the measured cooling target. Damper command averaged 92%, and zone temperature was 3.9 to 4.6°F above setpoint. This demonstrates an operating pattern, not a confirmed field condition.				EXPECTED NORMAL BEHAVIOR Damper command should correspond to actual blade response. Adequate delivered airflow and discharge-air conditions should help Zone VAV-214 recover toward its active cooling setpoint.						
RECOMMENDED FIELD ACTION Start with a VAV-214 damper command-versus-actual-position proof test. If blade position tracks command, validate airflow against its active airflow setpoint and measure discharge-air temperature. Use those results to distinguish local airflow delivery from upstream air-condition limitations. Validate zone temperature and the active cooling target before selecting corrective work.										
1 · BEFORE CHANGING ANYTHING										
CHECK					NORMAL	ABNORMAL	NOT CHECKED	UNABLE	NOTE / READING	
1. Mechanical: Compare VAV-214 damper command with actual blade position and check actuator and linkage travel.					☐	☐	☐	☐		
2. Mechanical/TAB: Measure VAV-214 airflow during high damper command. Compare it with VAV-214 Airflow Setpoint and check the airflow pickup and tubing against the field measurement.					☐	☐	☐	☐		
3. Mechanical: Measure VAV-214 Discharge Air Temperature during high damper command to assess delivered cooling.					☐	☐	☐	☐		
4. Controls: Validate Zone VAV-214 Zone Temperature with a calibrated field reading during high damper command.					☐	☐	☐	☐		
5. Controls: Confirm Zone VAV-214 cooling and heating setpoints and occupancy status during high damper command.					☐	☐	☐	☐		
2 · OBSERVATION AND READINGS					3 · ACTUAL WORK PERFORMED					
ITEM	BEFORE	AFTER	UNIT	SOURCE / TIME / TERMINAL ID	COMPLETE FIRST TECHNICIAN INITIALS				CONTRACTOR NAME	
Primary observed value			-							
Secondary observed value			-		TICKET #				OBSERVATION DATE / TIME	
Control setting / command			-		WORK-START DATE / TIME				COMPLETION DATE / TIME	
Equipment status			-		YYYY-MM-DD HH:mm · America/Chicago (local)					
OBSERVED ☐ Confirmed as reported ☐ Different condition found					☐ Not confirmed ☐ Unable to verify					
4 · POST-WORK FUNCTIONAL CHECK AND FOLLOW-UP					DISPOSITION					
Operate the affected sequence after work and record the observed response.					☐ Completed as recommended ☐ No action taken ☐ Unable			☐ Completed with change ☐ Deferred ☐ Declined		
FUNCTIONAL CHECK ☐ Pass ☐ Not performed					☐ Fail ☐ Further review needed			ACTION CATEGORIES		
					☐ Controls adjustment ☐ Setting change ☐ Other			☐ Mechanical repair ☐ Component replacement		
FOLLOW-UP NEEDS ☐ Parts / quote ☐ Controls review ☐ Mountvera trend verification								WORK PERFORMED		
Contractor functional check only. Mountvera trend verification remains pending before this Issue can be recorded as improved or resolved.					NOTES / UNRESOLVED QUESTIONS					
					Return the completed sheet to reports@mountvera.com with the response code in the subject line.					

Sample Report · mountvera.com | Verified Building Performance | Approved Report | MV-9115221CFC00 · v1

19/31

REVIEWED EVIDENCE INDEX

Evidence Appendix

The Evidence Appendix identifies the reviewed trend evidence used to support each report item and its intended field-verification use.

10 REVIEWED PROOFS	8 / 2 DIAGNOSTIC / VERIFICATION	Sep 18, 2026-Sep 26, 2026 DISPLAYED EVIDENCE SPAN	2 / 8 HISTORICAL / REPORT-PERIOD
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HOW TO USE Use each appendix reference with the related issue brief or verification update. Confirm evidence dates, points reviewed, limitations, and site conditions before acting.

Evidence Index

ITEMS 1-5 OF 10

A-1 PROOF	I-001 CHW Loop	Chart p. 22	
	DIAGNOSTIC EVIDENCE LATEST REVIEWED OCCURRENCE REPORT-PERIOD EVIDENCE Low delta-T with excess flow. WINDOW Sep 25, 2026 · 9:00 AM-3:25 PM CDT POINTS CHWS Temp, CHWR Temp, CHW Flow, CHW DP, CHW DP SP, CHW-P-2 Pump Spd Fbk, CHW-P-1 Pump Spd Fbk USE Diagnostic support and field checks.		
A-2 PROOF	I-002 AHU-1	Chart p. 23	
	DIAGNOSTIC EVIDENCE REVIEWED EVIDENCE WINDOW REPORT-PERIOD EVIDENCE Cooling with downstream reheat. WINDOW Sep 25, 2026 · 12:00 PM-2:55 PM CDT POINTS Cooling Coil Clg Coil Vlv Cmd, VAV-103 Reheat Coil Elec Heat Cmd, VAV-101 Reheat Coil Elec Heat Cmd USE Diagnostic support and field checks.		
A-3 PROOF	I-003 AHU-3	Chart p. 24	
	DIAGNOSTIC EVIDENCE DIAGNOSTIC BASELINE HISTORICAL EVIDENCE AHU-3: reviewed comparison signals. WINDOW Sep 18, 2026 2:55 PM-Sep 19, 2026 12:55 PM CDT POINTS SF Spd Cmd, VAV-303 Dmpr Cmd, VAV-303 Airflow, VAV-303 Airflow SP, VAV-306 Dmpr Cmd, VAV-306 Airflow, VAV-306 Airflow SP, VAV-301 Dmpr Cmd, VAV-301 Airflow, VAV-301 Airflow SP USE Diagnostic support and field checks. Latest included reviewed observation: Sep 19, 2026. No report-period observation is included for this evidence entry.		
A-4 PROOF	I-003 AHU-3	Chart p. 25	
	VERIFICATION EVIDENCE POST-ACTION VERIFICATION REPORT-PERIOD EVIDENCE AHU-3: reviewed post-action comparison. WINDOW Sep 26, 2026 · 9:00 AM-3:30 PM CDT POINTS Fan Sts, Occ Mode, SF Spd Cmd, VAV-301 Airflow, VAV-301 Airflow SP, VAV-301 Dmpr Cmd USE Before-and-after verification.		
A-5 PROOF	I-004 CHW-P-2	Chart p. 26	
	DIAGNOSTIC EVIDENCE REVIEWED EVIDENCE WINDOW REPORT-PERIOD EVIDENCE CHW-P-2: reviewed comparison signals. WINDOW Sep 25, 2026 · 9:30 AM-2:40 PM CDT POINTS Pump Spd Cmd, Pump Spd Fbk, CHW Loop CHW DP, CHW Loop CHW DP SP, Pump Sts USE Diagnostic support and field checks.		

REVIEWED EVIDENCE INDEX

Evidence Appendix

Evidence Index (continued)

ITEMS 6-10 OF 10

A-6 PROOF	I-005 AHU-3	Chart p. 27
	DIAGNOSTIC EVIDENCE REVIEWED EVIDENCE WINDOW REPORT-PERIOD EVIDENCE Discharge air temperature did not satisfy setpoint. WINDOW Sep 25, 2026 · 10:05 AM-3:20 PM CDT POINTS DAT, DAT SP USE Diagnostic support and field checks.	
A-7 PROOF	I-006 AHU-2	Chart p. 28
	DIAGNOSTIC EVIDENCE DIAGNOSTIC BASELINE HISTORICAL EVIDENCE AHU-2: reviewed comparison signals. WINDOW Sep 18, 2026 · 8:30 AM-1:30 PM CDT POINTS Outside Air Damper Dmpr Pos Cmd, Northlake Medical Office Building OAT, MAT, RAT USE Diagnostic support and field checks. Latest included reviewed observation: Sep 18, 2026. No report-period observation is included for this evidence entry.	
A-8 PROOF	I-006 AHU-2	Chart p. 29
	VERIFICATION EVIDENCE POST-ACTION VERIFICATION REPORT-PERIOD EVIDENCE AHU-2: reviewed post-action comparison. WINDOW Sep 26, 2026 · 8:30 AM-1:30 PM CDT POINTS Fan Sts, MAT, Occ Mode, RAT, Outside Air Damper Dmpr Pos Cmd, Northlake Medical Office Building OAT USE Before-and-after verification.	
A-9 PROOF	I-007 RTU-2	Chart p. 30
	DIAGNOSTIC EVIDENCE LATEST REVIEWED OCCURRENCE REPORT-PERIOD EVIDENCE Early startup before occupancy. WINDOW Sep 23, 2026 · 5:00 AM-7:00 AM CDT POINTS Unit Cmd, Unit Sts, Occ Mode, Zone Temp, Zone Temp SP, Clg Stg Cmd, Htg Stg Cmd, DAT USE Diagnostic support and field checks.	
A-10 PROOF	I-008 VAV-214	Chart p. 31
	DIAGNOSTIC EVIDENCE LATEST REVIEWED OCCURRENCE REPORT-PERIOD EVIDENCE Damper full open while zone not satisfying. WINDOW Sep 24, 2026 · 11:00 AM-4:25 PM CDT POINTS Zone Temp, Dmpr Cmd, Zone Clg SP USE Diagnostic support and field checks.	

DATA NOTES

Report dates and evidence windows are interpreted in the site timezone: America/Chicago.

Points reviewed lists the bounded report presentation set; the accepted evidence group retains the complete reviewed point set.

8 proofs include report-period evidence; 2 proofs use historical reviewed evidence. Evidence dates describe the displayed observations, not uninterrupted fault behavior.

EVIDENCE APPENDIX · DIAGNOSTIC EVIDENCE

A-1 · I-001

CHW LOOP · REVIEWED EVIDENCE · SEP 25, 2026 · 9:00 AM–3:25 PM CDT

CHW Loop low delta-T with elevated flow

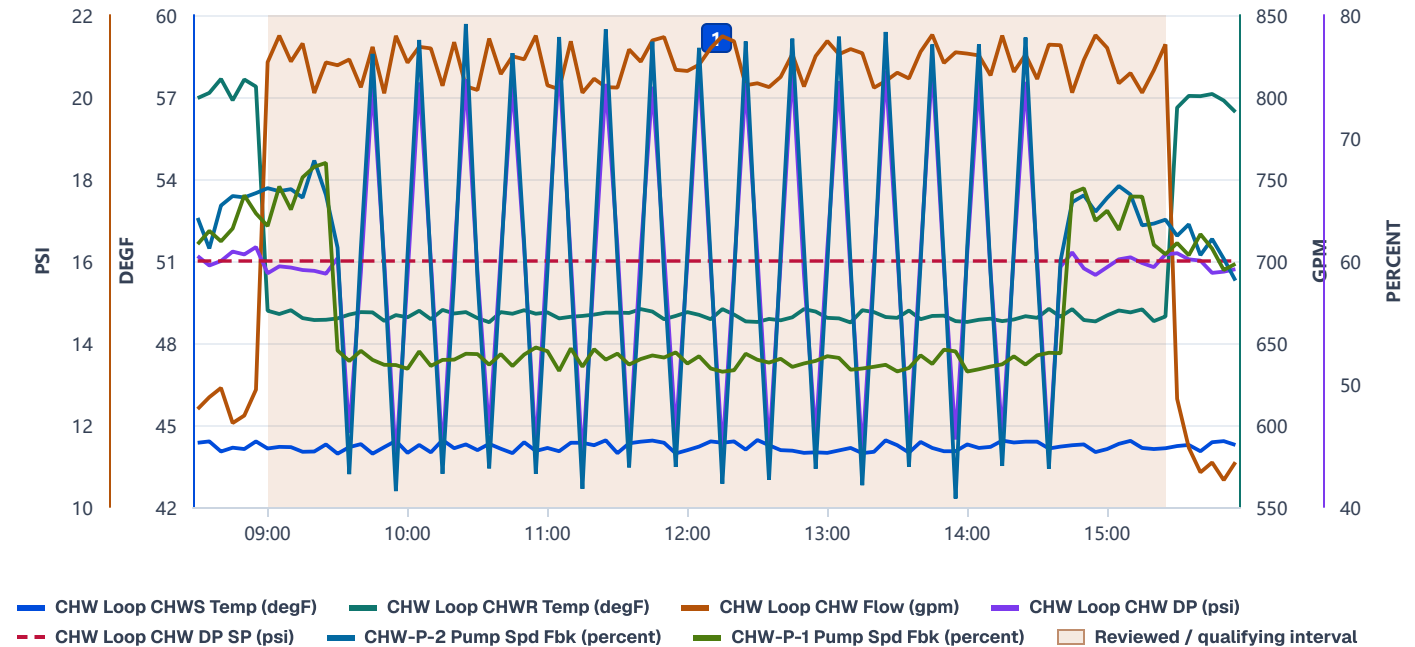
The CHW Loop showed low delta-T with elevated flow, consistent with excess circulation relative to heat transfer. Return-to-supply delta-T averaged 4.9°F in each documented interval. Site operating requirements still need confirmation before the flow can be judged excessive for the load.



Open interactive evidence

WHAT TO LOOK FOR

- Chilled-water flow remained high while the return-to-supply temperature difference stayed low, an excess-circulation and plant-efficiency signature.
 Low chilled-water delta-T while loop flow remained elevated 385 min


EVIDENCE AND STATISTICS
EVIDENCE ROLE

Latest reviewed occurrence

CHART WINDOW

Sep 25, 2026 · 8:28 AM–3:57 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW
Sep 25, 2026 · 9:00 AM–3:25 PM CDT

SIGNAL	MIN	AVG	MAX	UNIT	SIGNAL	MIN	AVG	MAX	UNIT
CHW Loop CHWS Temp	43.95	44.2	44.45	degF	CHW Loop CHW DP SP	16	16	16	psi
CHW Loop CHWR Temp	48.75	50.08	57.66	degF	CHW-P-2 Pump Spd Fbk	40.69	61.04	79.27	percent
CHW Loop CHW Flow	566.4	790.96	837.94	gpm	CHW-P-1 Pump Spd Fbk	51	55.36	67.98	percent
CHW Loop CHW DP	11.11	15.92	20.79	psi					

LIMITATIONS AND COVERAGE

The finding covers the full evaluated population and qualifying intervals. The chart shows the reviewed comparison signals.

Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-1](#)

EVIDENCE APPENDIX · DIAGNOSTIC EVIDENCE

A-2 · I-002

AHU-1 · REVIEWED EVIDENCE · SEP 25, 2026 · 12:00–2:55 PM CDT

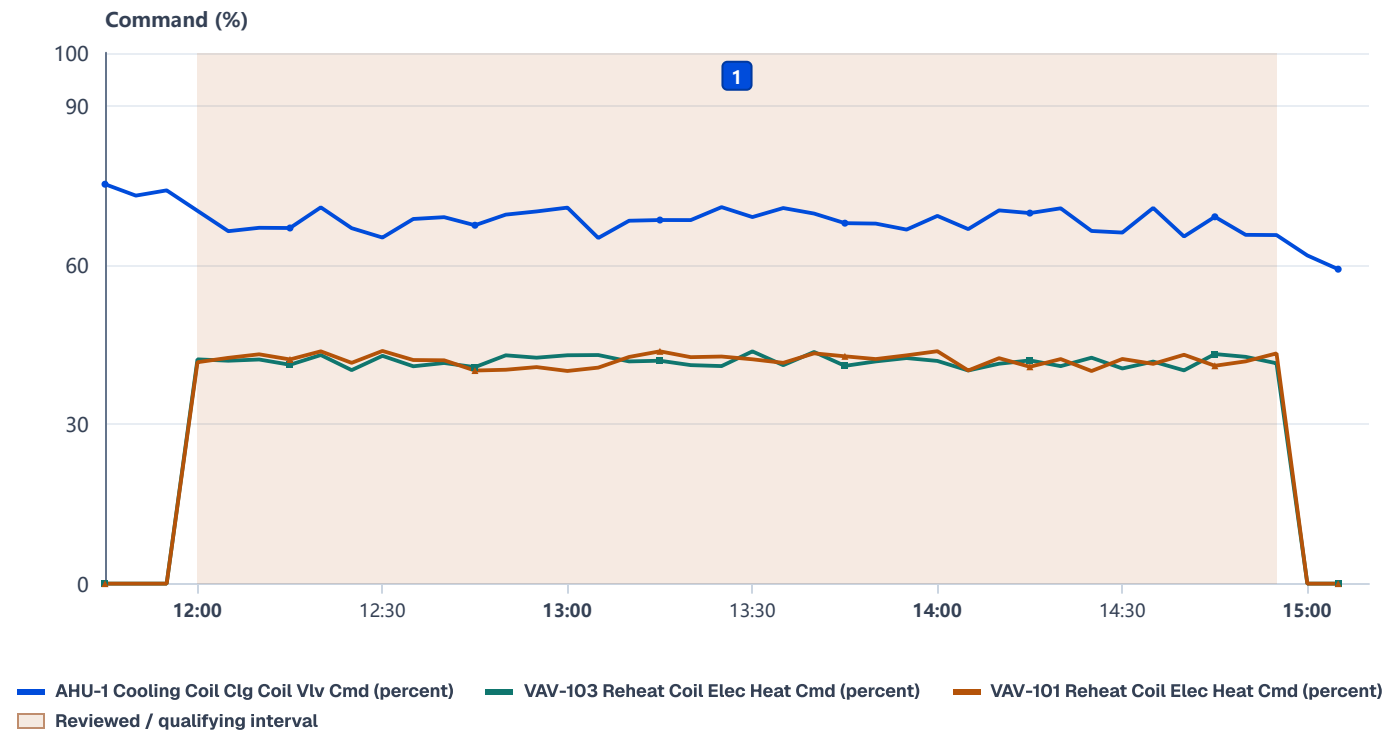
AHU-1 cooling command overlap with downstream reheat commands

AHU-1 cooling command overlap with downstream electric reheat commands raises a control coordination concern. Interval averages were 68% for cooling valve command and 42% for each terminal's reheat command. Actual cooling and heating remain unconfirmed. Zone demand or approved sequence exceptions may justify the overlap, so a control fault is not established.


 Open interactive
evidence

WHAT TO LOOK FOR

- AHU cooling command was active while one or more downstream VAV reheat commands were elevated.
 VAV-103 Reheat Coil Heating Coil Electric Heat Command reheat active while AHU cooling active 175 min


EVIDENCE AND STATISTICS
EVIDENCE ROLE

Reviewed evidence window

CHART WINDOW

Sep 25, 2026 · 11:45 AM–3:10 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW
Sep 25, 2026 · 12:00–2:55 PM CDT

SIGNAL	MIN	AVG	MAX UNIT
AHU-1 Cooling Coil Clg Coil Vlv Cmd	59.23	68.34	75.24 percent
VAV-103 Reheat Coil Elec Heat Cmd	0	36.78	43.75 percent
VAV-101 Reheat Coil Elec Heat Cmd	0	36.95	43.83 percent

LIMITATIONS AND COVERAGE

The finding covers the full evaluated population and qualifying intervals. The chart shows selected signals. It does not include every evaluated point. Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-2](#)

EVIDENCE APPENDIX · DIAGNOSTIC EVIDENCE

A-3 · I-003

AHU-3 · REVIEWED EVIDENCE · SEP 18, 2026, 2:55 PM CDT – SEP 19, 2026, 12:55 PM CDT

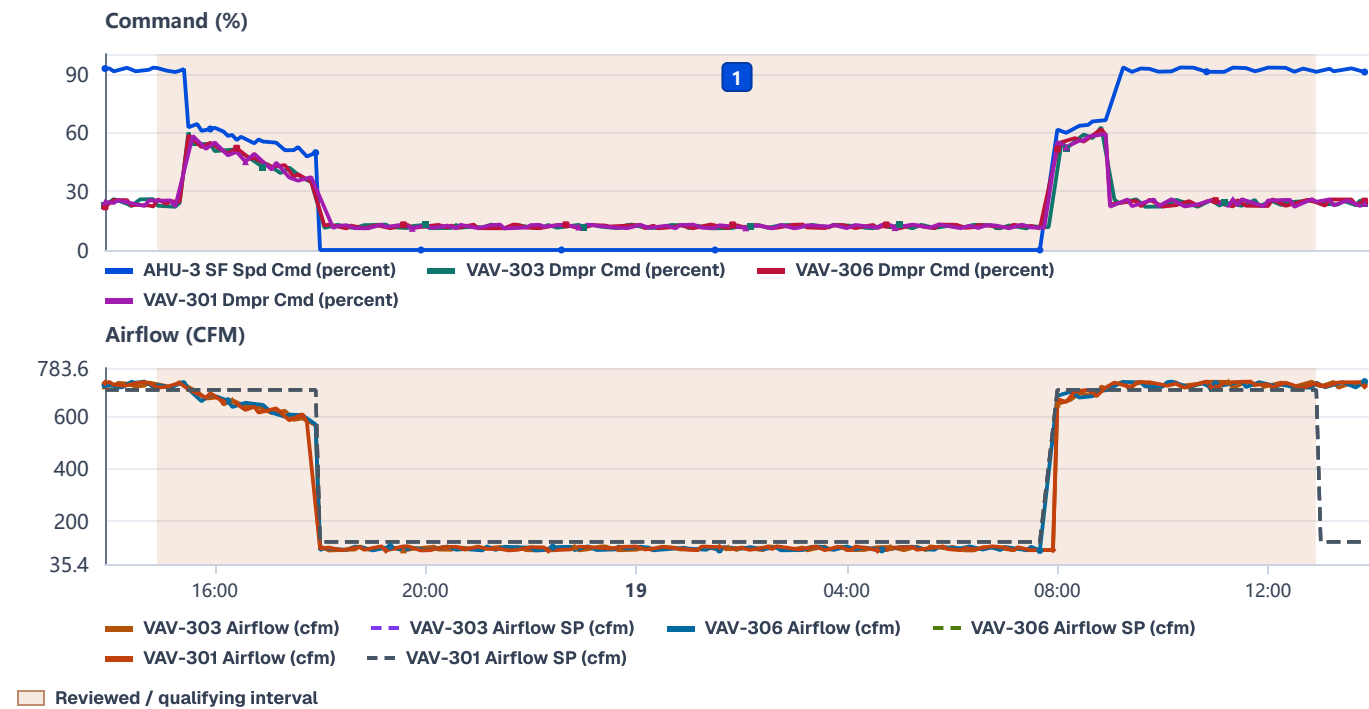
AHU-3 high fan speed command with low terminal damper commands



Open interactive evidence

WHAT TO LOOK FOR

- AHU-3 fan speed command averaged 92% while terminal damper commands averaged 24%, supporting a controls investigation rather than a confirmed pressure-reset fault. A subsequent staff-transcribed synthetic field report documented a split pressure pickup tube and leaking fitting. The tube was replaced and fittings secured. Mountvera-reviewed trends supported improvement, but did not prove repair causality.
 Selected evidence context


EVIDENCE AND STATISTICS
EVIDENCE ROLE

Diagnostic baseline

CHART WINDOW

Sep 18, 2026, 1:55 PM CDT – Sep 19, 2026, 1:55 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW
Sep 18, 2026, 2:55 PM CDT – Sep 19, 2026, 12:55 PM CDT

SIGNAL	MIN	AVG	MAX UNIT	SIGNAL	MIN	AVG	MAX UNIT
AHU-3 SF Spd Cmd	0	33.4	93.18 percent	VAV-306 Airflow	87.09	345.23	731.98 cfm
VAV-303 Dmpr Cmd	11.01	20.35	62.65 percent	VAV-306 Airflow SP	120	339.51	700 cfm
VAV-303 Airflow	87.04	344.58	731.45 cfm	VAV-301 Dmpr Cmd	11	20.64	59.18 percent
VAV-303 Airflow SP	120	339.51	700 cfm	VAV-301 Airflow	87.1	345.59	731.91 cfm
VAV-306 Dmpr Cmd	11.01	20.75	61.62 percent	VAV-301 Airflow SP	120	339.51	700 cfm

LIMITATIONS AND COVERAGE

The finding covers more evidence than this chart. The selected signals do not establish all qualifying measurements. The chart shows selected signals. It does not include every evaluated point.

Statistics cover the full prepared window, including any added operating context. The chart shows fewer samples for display. The full prepared window was read. No gaps were reported in the data read. 10 selected signals. The chart shows 1,200 samples from 2,877 source samples.

[Interactive evidence · A-3](#)

EVIDENCE APPENDIX · VERIFICATION EVIDENCE

A-4 · I-003

AHU-3 · REVIEWED EVIDENCE · SEP 26, 2026 · 9:00 AM–3:30 PM CDT

AHU-3 high fan speed command with low terminal damper commands

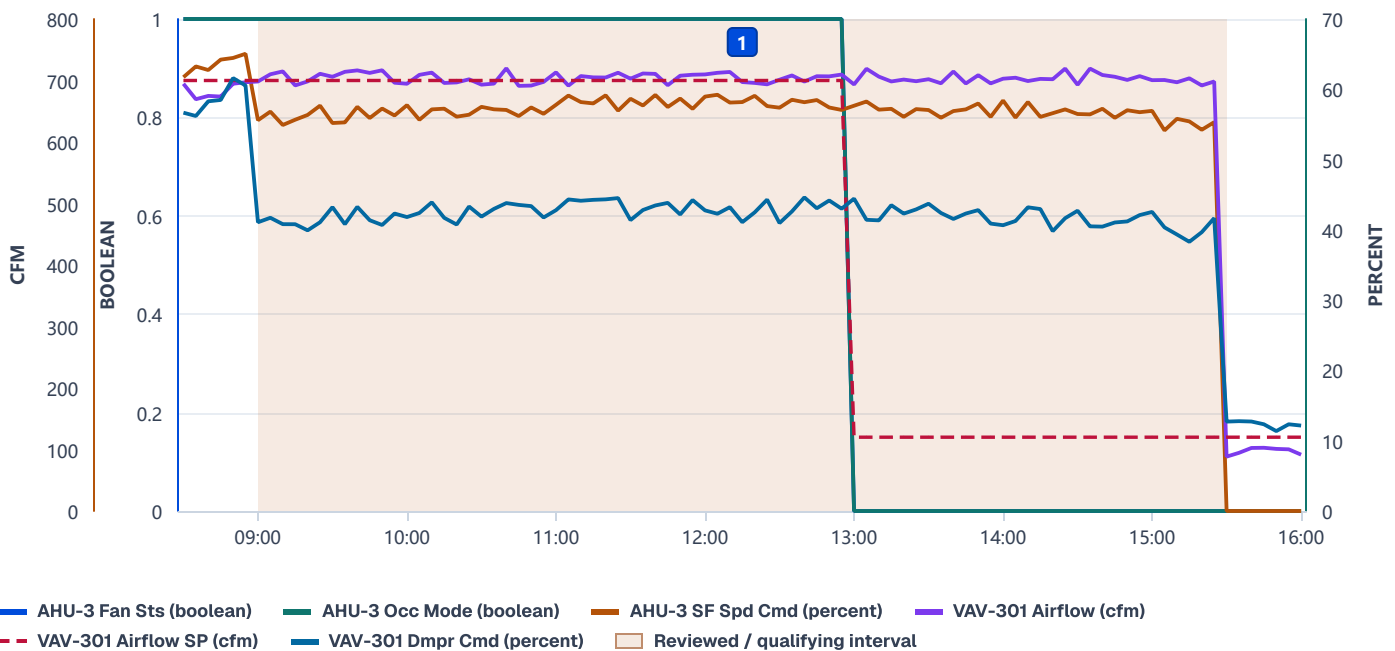
AHU-3 fan speed command averaged 92% while terminal damper commands averaged 24%, supporting a controls investigation rather than a confirmed pressure-reset fault. A subsequent staff-transcribed synthetic field report documented a split pressure pickup tube and leaking fitting. The tube was replaced and fittings secured. Mountvera-reviewed trends supported improvement, but did not prove repair causality.


 Open interactive
evidence

WHAT TO LOOK FOR

- 1 Reviewed post-action comparison signals. Occupied mode and fan status identify operating context; this chart does not independently establish repair causality.

Selected evidence context


EVIDENCE AND STATISTICS
EVIDENCE ROLE

Post-action verification

CHART WINDOW

Sep 26, 2026 · 8:28 AM–4:02 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW
Sep 26, 2026 · 9:00 AM–3:30 PM CDT

SIGNAL	MIN	AVG	MAX UNIT	SIGNAL	MIN	AVG	MAX UNIT
AHU-3 Fan Sts	0	0.62	1 boolean	VAV-301 Airflow	88.41	655.87	719.8 cfm
AHU-3 Occ Mode	0	0.59	1 boolean	VAV-301 Airflow SP	120	464.18	700 cfm
AHU-3 SF Spd Cmd	0	53.11	65.05 percent	VAV-301 Dmpr Cmd	11.37	41.02	61.59 percent

LIMITATIONS AND COVERAGE

The finding covers more evidence than this chart. The selected signals do not establish all qualifying measurements. The chart shows selected signals. It does not include every evaluated point. Baseline: The AHU fan speed command remained near maximum while most downstream VAV dampers were low and measured airflow met setpoint, consistent with an excessive static-pressure or fan-control demand signature.

Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-4](#)

EVIDENCE APPENDIX · DIAGNOSTIC EVIDENCE

A-5 · I-004

CHW-P-2 · REVIEWED EVIDENCE · SEP 25, 2026 · 9:30 AM–2:40 PM CDT

CHW-P-2 speed cycling with loop differential-pressure variation

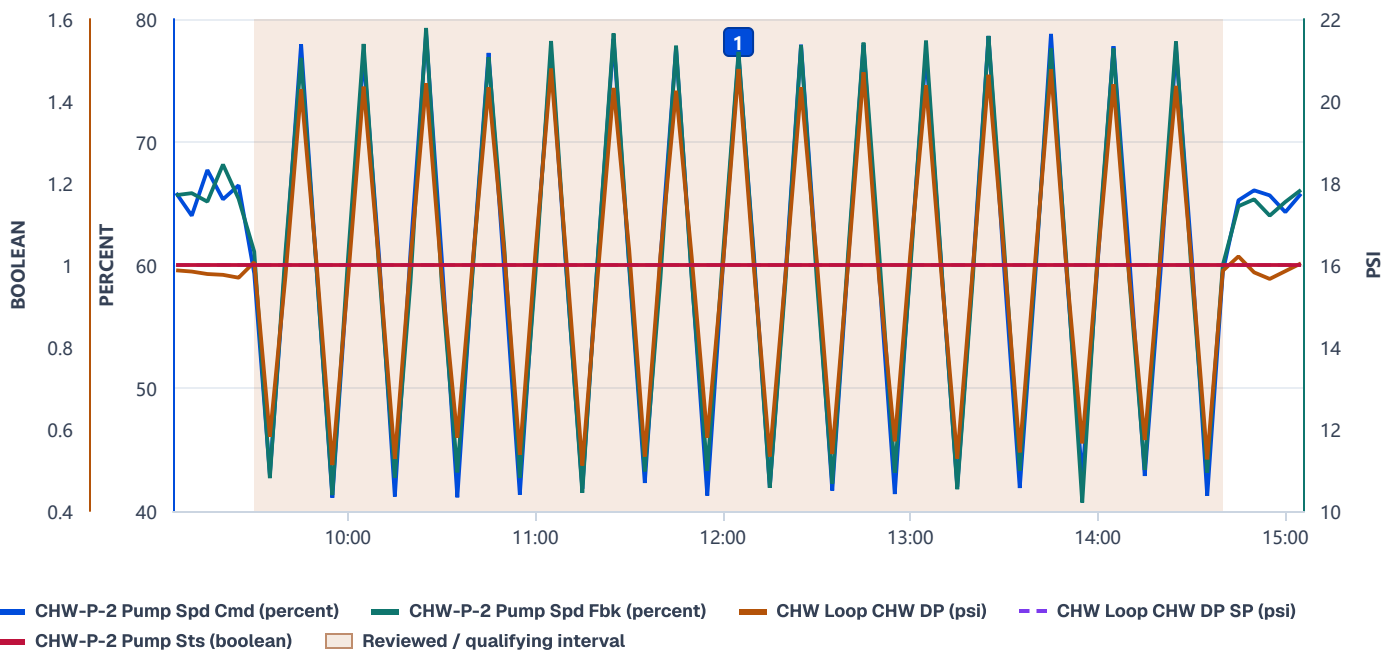
CHW-P-2 speed command and feedback cycled while shared chilled-water loop differential pressure varied relative to setpoint. Documented command swings included 38 percentage points. Close average command-to-feedback tracking supports a control or loop-side concern rather than a persistent speed-tracking discrepancy.


 Open interactive
evidence

WHAT TO LOOK FOR

- The selected pump's command and feedback varied with shared loop differential pressure and setpoint within this contiguous operating interval. The interval bounds an observed cycling pattern, not proof of uninterrupted hunting at every sample.

CHW-P-2 Pump Speed Command speed hunting while loop DP varied 310 min


EVIDENCE AND STATISTICS

EVIDENCE ROLE

Reviewed evidence window

CHART WINDOW

Sep 25, 2026 · 9:04 AM–3:06 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW

Sep 25, 2026 · 9:30 AM–2:40 PM CDT

SIGNAL	MIN	AVG	MAX UNIT
CHW-P-2 Pump Spd Cmd	41.08	60.41	78.8 percent
CHW-P-2 Pump Spd Fbk	40.69	60.58	79.27 percent
CHW Loop CHW DP	11.11	15.91	20.79 psi
CHW Loop CHW DP SP	16	16	16 psi
CHW-P-2 Pump Sts	1	1	1 boolean

LIMITATIONS AND COVERAGE

The finding covers more evidence than this chart. The selected signals do not establish all qualifying measurements. The chart shows selected signals. It does not include every evaluated point.

Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-5](#)

EVIDENCE APPENDIX · DIAGNOSTIC EVIDENCE

A-6 · I-005

AHU-3 · REVIEWED EVIDENCE · SEP 25, 2026 · 10:05 AM–3:20 PM CDT

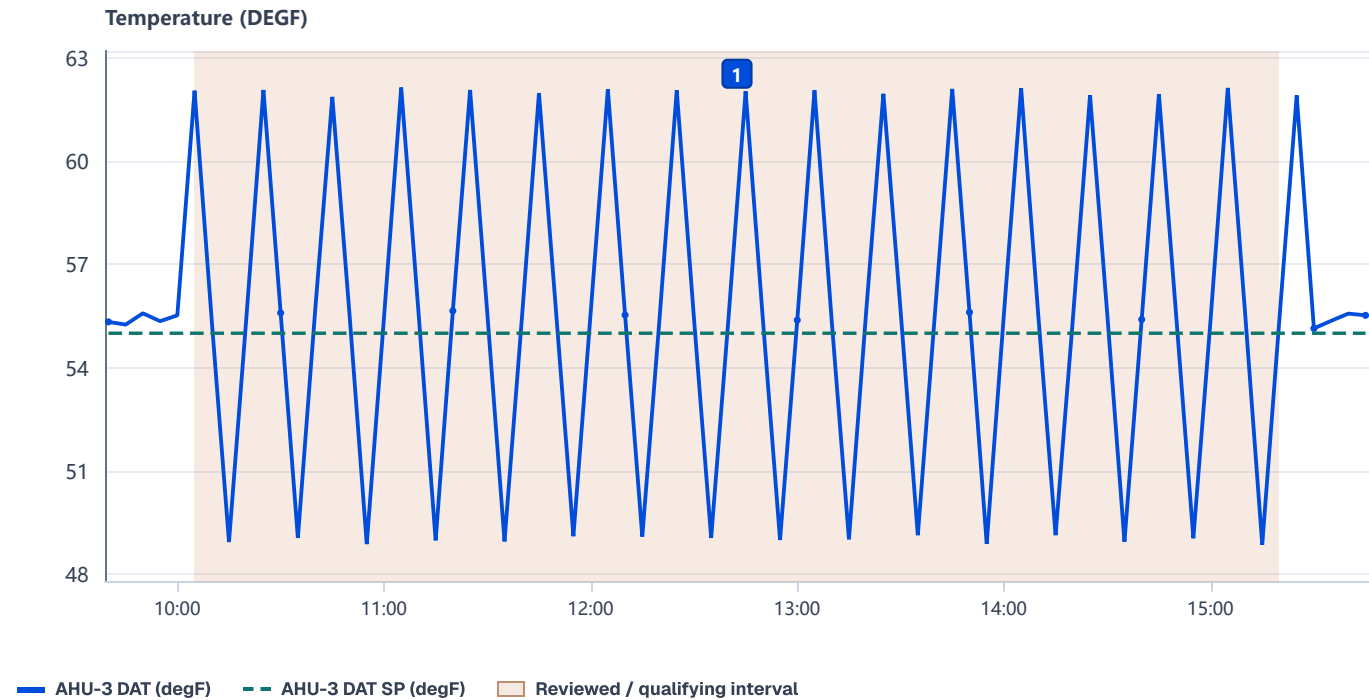
AHU-3 discharge air temperature departs from setpoint

AHU-3 has a discharge air temperature tracking concern. Representative discharge temperature was 62.1 °F against a measured setpoint of 55.0 °F, a departure of 7.1 °F above setpoint. Departures below setpoint were also recorded.


 Open interactive
evidence

WHAT TO LOOK FOR

- Discharge air temperature stayed away from setpoint beyond the configured deadband.
Cumulative deviation 160 min


EVIDENCE AND STATISTICS
EVIDENCE ROLE

Reviewed evidence window

CHART WINDOW

Sep 25, 2026 · 9:39 AM–3:46 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW
Sep 25, 2026 · 10:05 AM–3:20 PM CDT

SIGNAL	MIN	AVG	MAX UNIT
AHU-3 DAT	48.85	55.59	62.14 degF
AHU-3 DAT SP	55	55	55 degF

LIMITATIONS AND COVERAGE

The finding covers the full evaluated population and qualifying intervals. The chart shows selected signals. It does not include every evaluated point. Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-6](#)

EVIDENCE APPENDIX · DIAGNOSTIC EVIDENCE

A-7 · I-006

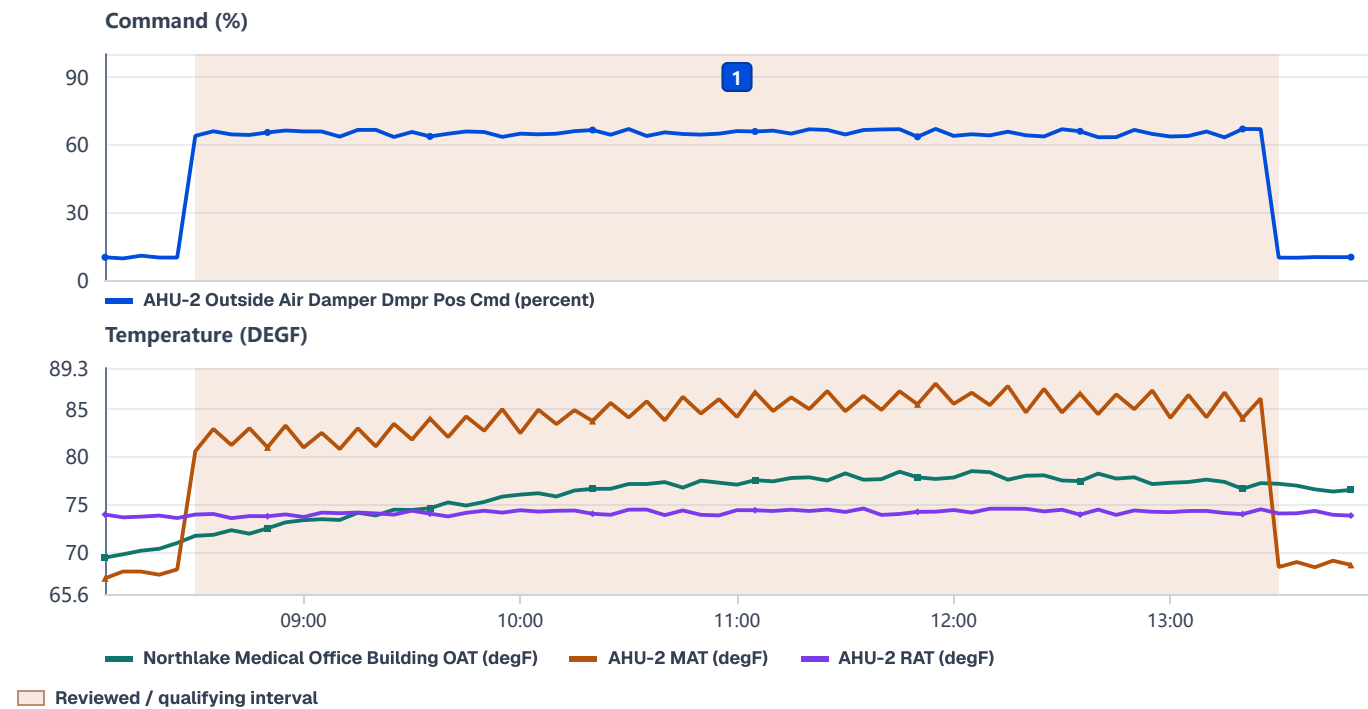
AHU-2 · REVIEWED EVIDENCE · SEP 18, 2026 · 8:30 AM–1:30 PM CDT

AHU-2 mixed-air readings above both source-air temperatures


 Open interactive
evidence

WHAT TO LOOK FOR

- AHU-2 mixed-air readings were above both source-air readings, with representative values of 87.3°F and 87.6°F during outside-air damper commands. The baseline investigation favored validating the measurement before assigning a damper fault. Subsequent staff-transcribed demonstration findings reported a cabinet-temperature source mapped to the BAS mixed-air input and correction to the existing mixed-air probe. MAT outside OAT/RAT bounds


EVIDENCE AND STATISTICS

EVIDENCE ROLE Diagnostic baseline

CHART WINDOW Sep 18, 2026 · 8:05 AM–1:55 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW **Sep 18, 2026 · 8:30 AM–1:30 PM CDT**

SIGNAL	MIN	AVG	MAX UNIT
AHU-2 Outside Air Damper Dmpr Pos Cmd	9.54	57.2	66.87 percent
Northlake Medical Office Building OAT	69.38	75.83	78.44 degF
AHU-2 MAT	67.2	82.15	87.61 degF
AHU-2 RAT	73.51	74.08	74.52 degF

LIMITATIONS AND COVERAGE

The finding covers more evidence than this chart. The selected signals do not establish all qualifying measurements. The chart shows selected signals. It does not include every evaluated point.

Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-7](#)

EVIDENCE APPENDIX · VERIFICATION EVIDENCE

A-8 · I-006

AHU-2 · REVIEWED EVIDENCE · SEP 26, 2026 · 8:30 AM–1:30 PM CDT

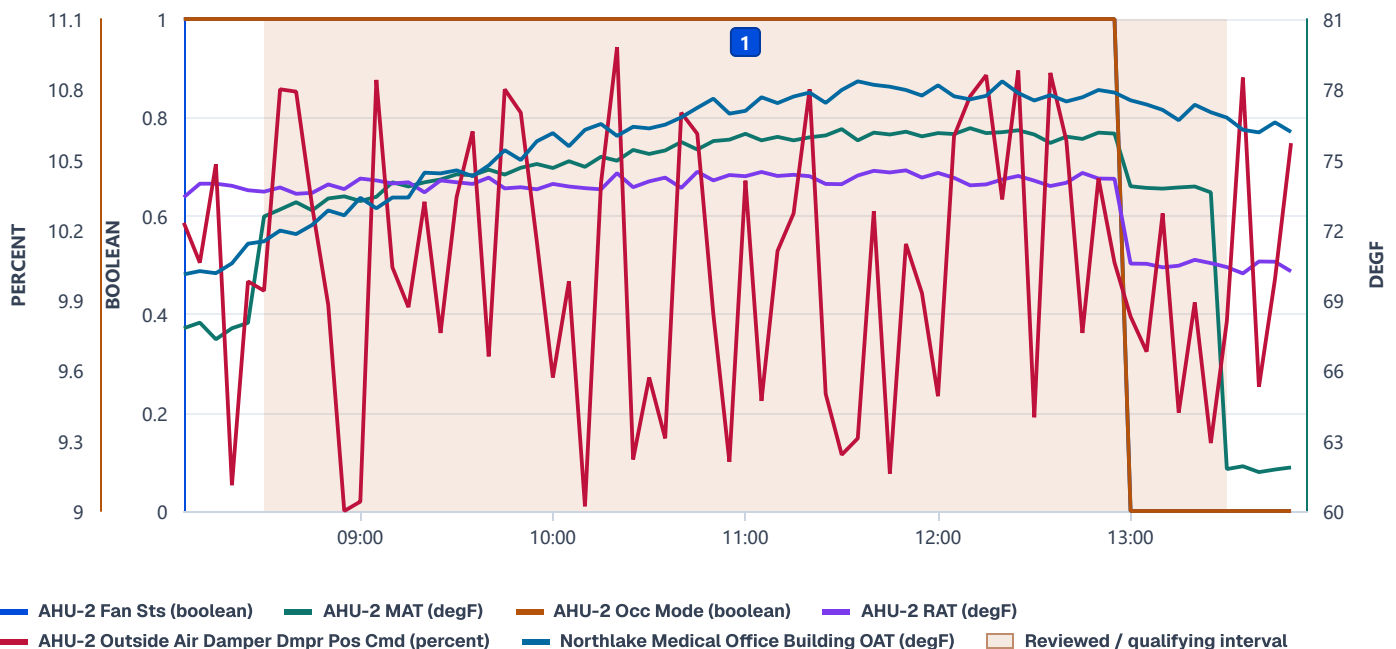

 Open interactive
evidence

AHU-2 mixed-air readings above both source-air temperatures

AHU-2 mixed-air readings were above both source-air readings, with representative values of 87.3°F and 87.6°F during outside-air damper commands. The baseline investigation favored validating the measurement before assigning a damper fault. Subsequent staff-transcribed demonstration findings reported a cabinet-temperature source mapped to the BAS mixed-air input and correction to the existing mixed-air probe.

WHAT TO LOOK FOR

- Reviewed post-action comparison signals. Occupied mode and fan status identify operating context; this chart does not independently establish repair causality.
Selected evidence context


EVIDENCE AND STATISTICS
EVIDENCE ROLE

Post-action verification

CHART WINDOW

Sep 26, 2026 · 8:05 AM–1:55 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW
Sep 26, 2026 · 8:30 AM–1:30 PM CDT

SIGNAL	MIN	AVG	MAX UNIT	SIGNAL	MIN	AVG	MAX UNIT
AHU-2 Fan Sts	0	0.84	1 boolean	AHU-2 RAT	70.14	73.49	74.54 degF
AHU-2 MAT	61.66	73.53	76.34 degF	AHU-2 Outside Air Damper Dmpr Pos Cmd	9	10.04	10.98 percent
AHU-2 Occ Mode	0	0.84	1 boolean	Northlake Medical Office Building OAT	70.1	75.82	78.34 degF

LIMITATIONS AND COVERAGE

The finding covers more evidence than this chart. The selected signals do not establish all qualifying measurements. The chart shows selected signals. It does not include every evaluated point. Baseline: Mixed air temperature exceeded the outside/return air temperature bounds including tolerance while the outside-air damper command met the screening threshold. Actual damper position was not confirmed.

Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-8](#)

EVIDENCE APPENDIX · DIAGNOSTIC EVIDENCE

A-9 · I-007

RTU-2 · REVIEWED EVIDENCE · SEP 23, 2026 · 5:00–7:00 AM CDT

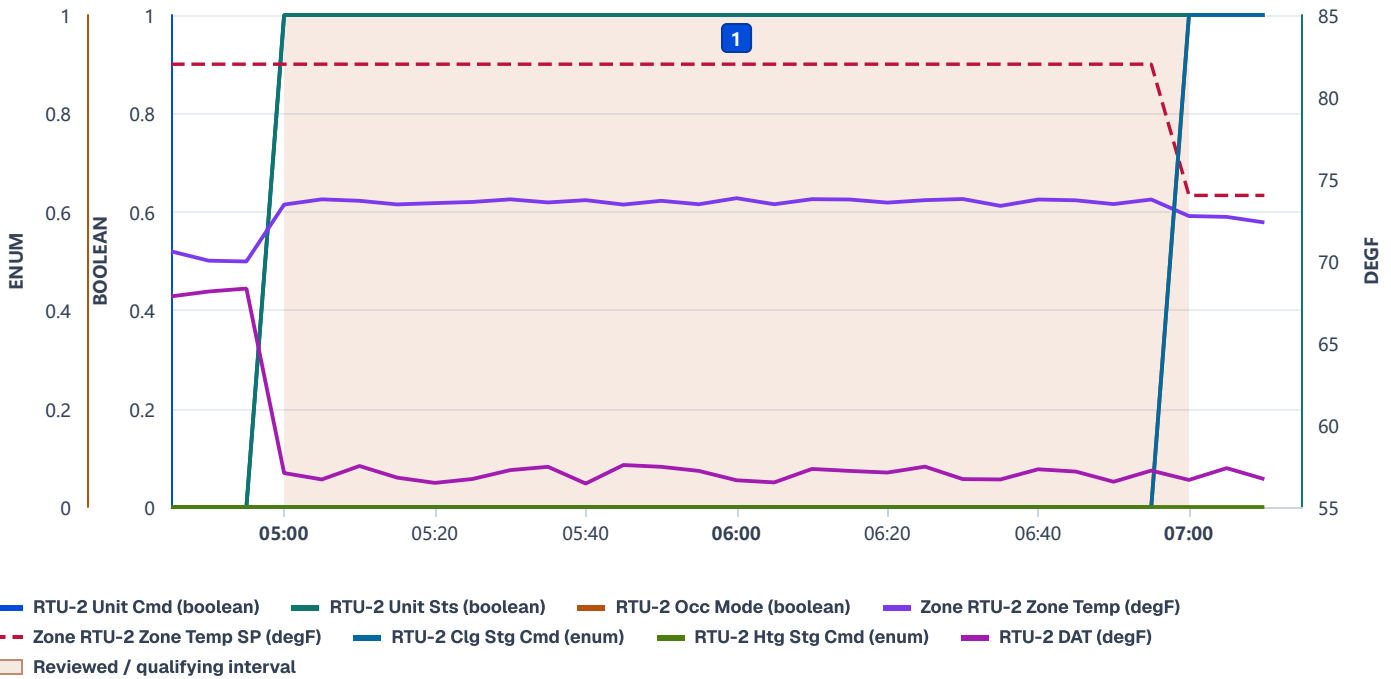
RTU-2 preoccupancy enable without active stage commands

RTU-2 showed preoccupancy runtime without active heating or cooling stage commands in synthetic demonstration evidence. Unit command and proof were active while Occupied Mode indicated unoccupied operation. This supports checking the early enable, but does not establish unnecessary runtime or a mechanical cause.


 Open interactive
evidence

WHAT TO LOOK FOR

- The RTU was enabled and proven running before occupancy while cooling and heating stages were inactive.
unit running before occupancy without staged demand 120 min


EVIDENCE AND STATISTICS
EVIDENCE ROLE

Latest reviewed occurrence

CHART WINDOW

Sep 23, 2026 · 4:45–7:15 AM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW
Sep 23, 2026 · 5:00–7:00 AM CDT

SIGNAL	MIN	AVG	MAX UNIT	SIGNAL	MIN	AVG	MAX UNIT
RTU-2 Unit Cmd	0	0.9	1 boolean	Zone RTU-2 Zone Temp SP	74	81.2	82 degF
RTU-2 Unit Sts	0	0.9	1 boolean	RTU-2 Clg Stg Cmd	0	0.1	1 enum
RTU-2 Occ Mode	0	0.1	1 boolean	RTU-2 Htg Stg Cmd	0	0	0 enum
Zone RTU-2 Zone Temp	69.97	73.18	73.83 degF	RTU-2 DAT	56.43	58.11	68.32 degF

LIMITATIONS AND COVERAGE

The finding covers the full evaluated population and qualifying intervals. The chart shows the reviewed comparison signals.

Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-9](#)

EVIDENCE APPENDIX · DIAGNOSTIC EVIDENCE

A-10 · I-008

VAV-214 · REVIEWED EVIDENCE · SEP 24, 2026 · 11:00 AM–4:25 PM CDT

VAV-214 high damper command with zone above cooling target in synthetic data

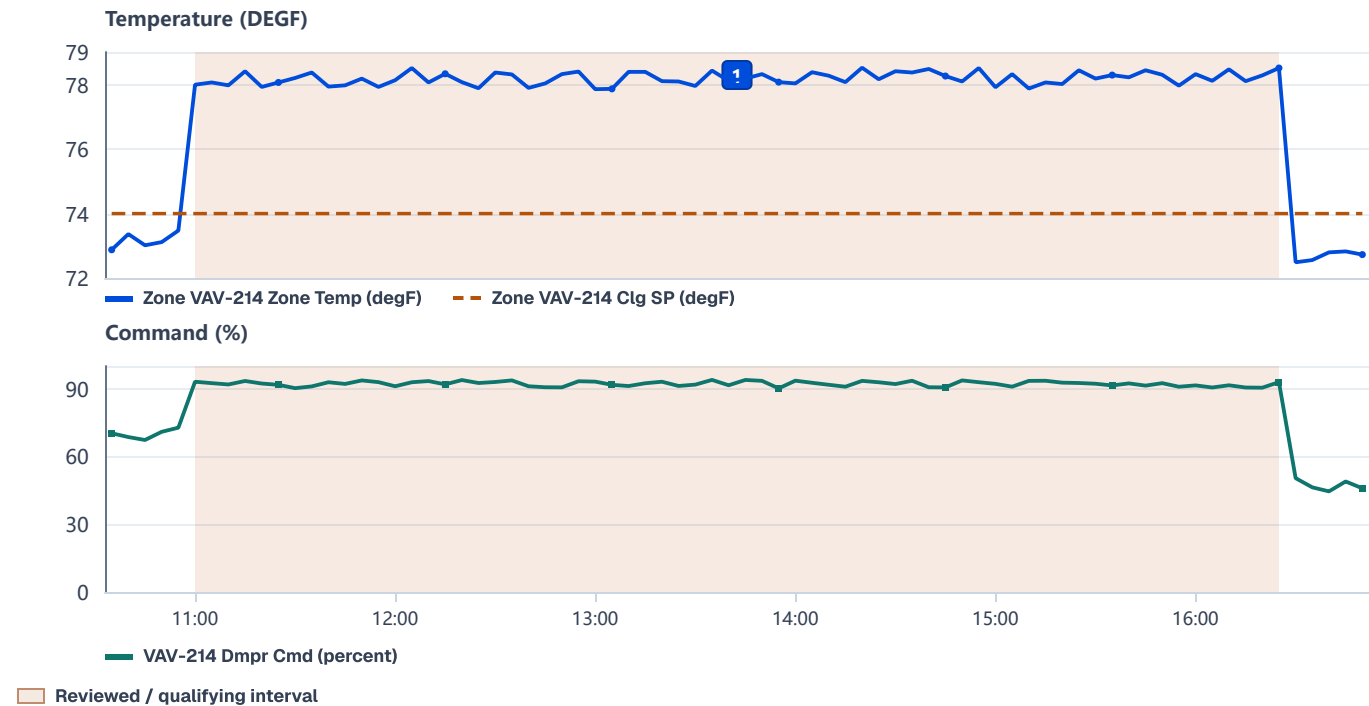
Synthetic data shows VAV-214 at a high damper command while its served zone remained above the measured cooling target. Damper command averaged 92%, and zone temperature was 3.9 to 4.6°F above setpoint. This demonstrates an operating pattern, not a confirmed field condition.



Open interactive evidence

WHAT TO LOOK FOR

- 1 Damper command was high while zone temperature remained above cooling target.
damper full open while zone above cooling target 325 min


EVIDENCE AND STATISTICS
EVIDENCE ROLE

Latest reviewed occurrence

CHART WINDOW

Sep 24, 2026 · 10:33 AM–4:52 PM CDT · Also used for statistics.

SELECTED EVIDENCE WINDOW
Sep 24, 2026 · 11:00 AM–4:25 PM CDT

SIGNAL	MIN	AVG	MAX UNIT
Zone VAV-214 Zone Temp	72.48	77.52	78.55 degF
VAV-214 Dmpr Cmd	44.52	87.73	93.85 percent
Zone VAV-214 Clg SP	74	74	74 degF

LIMITATIONS AND COVERAGE

The finding covers the full evaluated population and qualifying intervals. The chart shows the reviewed comparison signals.

Statistics cover the full prepared window, including any added operating context. The full prepared window was read. No gaps were reported in the data read.

[Interactive evidence · A-10](#)