

# Installation Instructions

## **Comparative Enthalpy Kit**

Precedent™ Packaged Rooftop Units

3 to 25 Tons

**Model Number:** FIAENTH002\*    **Used With:** 3 to 25 tons with Symbio™ controls

### SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

# Introduction

Read this manual thoroughly before operating or servicing this unit.

## Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

- ⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
- NOTICE** Indicates a situation that could result in equipment or property-damage only accidents.

## Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

## Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

**⚠ WARNING**

**Proper Field Wiring and Grounding Required!**

Failure to follow code could result in death or serious injury. All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in **NEC** and your local/state/national electrical codes.

**⚠ WARNING**

**Personal Protective Equipment (PPE) Required!**

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST** follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

**⚠ WARNING**

**Follow EHS Policies!**

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

**⚠ WARNING**

**R-454B Flammable A2L Refrigerant!**

Failure to use proper equipment or components as described below could result in equipment failure, and possibly fire, which could result in death, serious injury, or equipment damage.

The equipment described in this manual uses R-454B refrigerant which is flammable (A2L). Use ONLY R-454B rated service equipment and components. For specific handling concerns with R-454B, contact your local representative.

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## Revision History

- Used with information updated on the front cover.
- Updated Installation chapter.

# General Information

## Inspection

1. Unpack all components of the kit.
2. Check carefully for shipping damage. If any damage is found, report it immediately, and file a claim against the transportation company.

## Parts List

**Table 1. Parts list**

<b>Qty</b>	<b>Description</b>
1	Controls, Economizer, Comparative Enthalpy Harness
1	Return Air Temperature Sensor
2	Humidity Sensor with Label
2	0.44 ID - Snap Bushing
4	7.78 -in. 50-lb. 0.184-in. Wide Nylon Wire Tie
1	0.25 ID - Molded Grommet
4	Sharp Crested or Sharp Lead Thread Screw

# Installation

## ⚠ WARNING

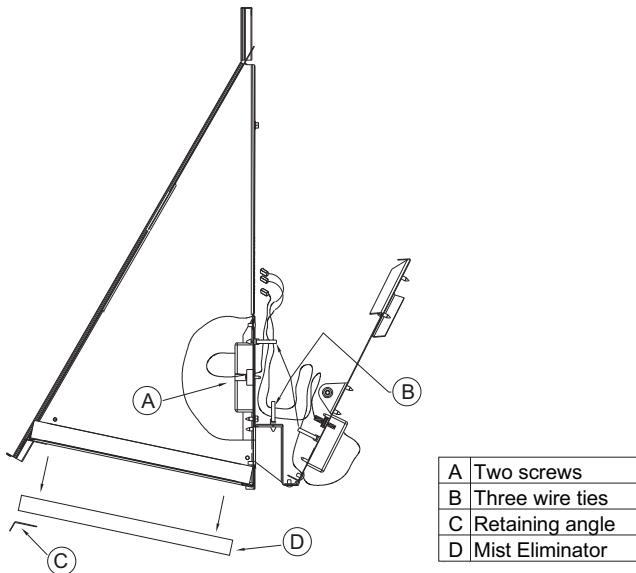
### Hazardous Voltage w/Capacitors!

Failure to disconnect power and discharge capacitors before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects and discharge all motor start/run capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized. Verify with a CAT III or IV voltmeter rated per NFPA 70E that all capacitors have discharged.

## Outdoor Humidity Sensor

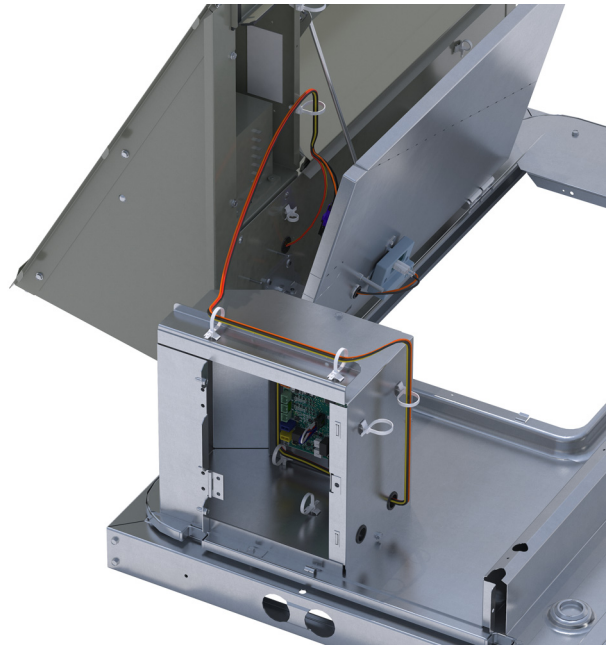
1. Remove filter access panel.
2. For a standard economizer, remove one screw from the mist eliminator, loosen the other screw, and retain the angle.
3. Remove the mist eliminator.
4. Connect red and yellow wires to outdoor humidity sensor. Connect red wire to the positive (+) terminal and yellow wire to the negative (-) terminal of humidity sensor.
5. Position sensor and secure with two screws as shown in [Figure 1](#). See figures below for sensor locations.

**Figure 1. Route sensor wires**



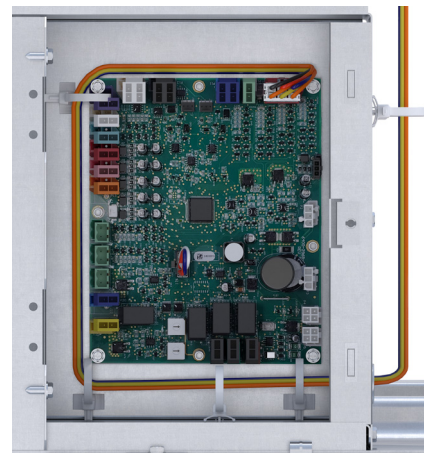
6. Route sensor wires through star bushing shown in [Figure 1](#) and [Figure 2](#).

**Figure 2. Wire routing to fresh air options module**



7. Connect J9 (red connector) from harness to P9 of fresh air options module (located in return enclosure). See [Figure 3](#).

**Figure 3. Wire connection to fresh air options module**



8. Secure wires with wire tie as shown in [Figure 1](#). After installation is complete, Symbio™ 700 UC unit configuration will need to be updated to reflected installed option.
9. Replace mist eliminator.
10. Replace mist eliminator retaining angle by sliding one slotted end of the retaining angle onto the loosened screw and replace the screw on the other end of the retaining angle.
11. Tighten both screws.

## Installation

### Return Air Humidity Sensor and Return Air Temperature Sensor

1. Connect the purple connector (PPF62) to the temperature sensor. Connect the black and orange wires to the return humidity sensor. Connect the black wire to the positive (+) terminal and orange wire to the negative (-) terminal of humidity sensor.
2. Install return air humidity sensor and secure with two screws.
3. Use a molded grommet to install the thermistor sensor.
4. Route the return air humidity sensor through the grommet.  
**Note:** Allow enough slack in wire harness to permit the return air damper blade to close without pulling or binding the harness.
5. Replace the filter access panel.

Figure 4. Outdoor and return sensor location for A, B, and C cabinet standard economizer (digit 39 = A, B, C)

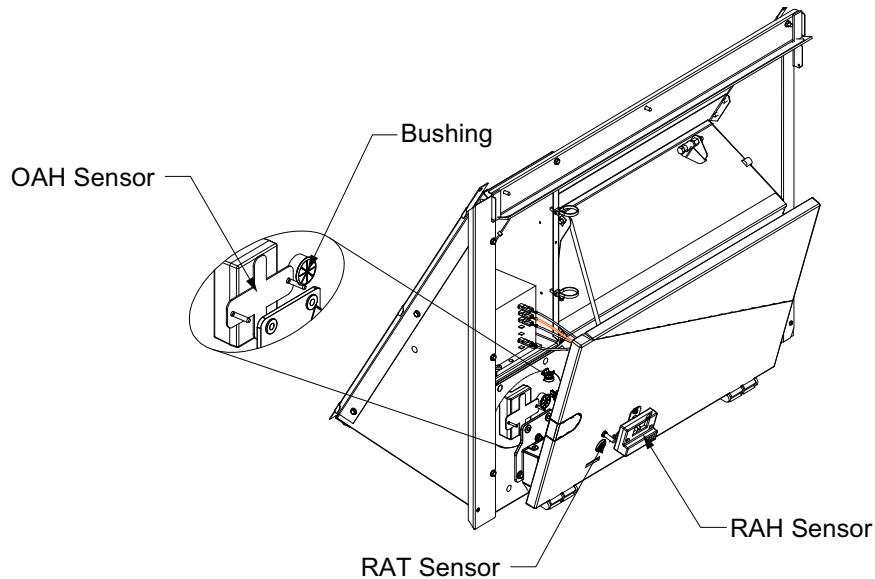
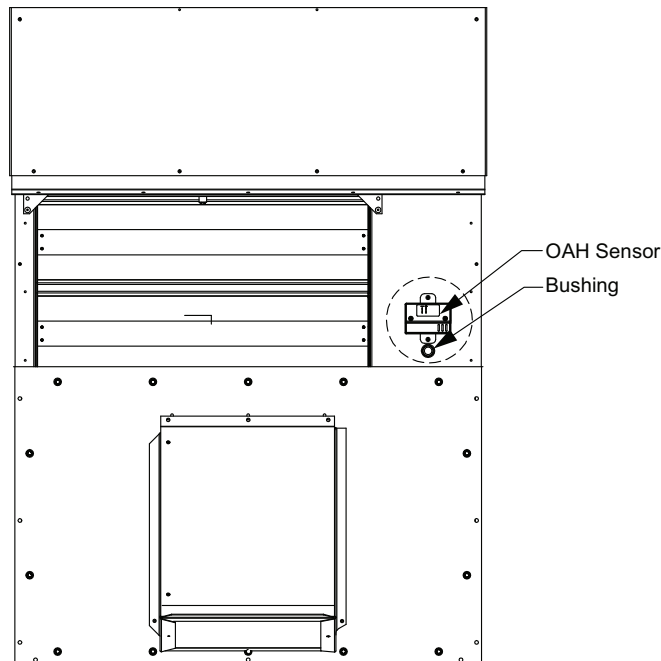


Figure 5. Outdoor sensor location for A, B, and C cabinet low leak economizer<sup>(a)</sup> (digit 39 = A, B, C)



(a) Uninstalled components are located in the return enclosure.

Figure 6. Outdoor Sensor location for A, B, and C cabinet horizontal low leak economizer (digit 39 = A, B, C)

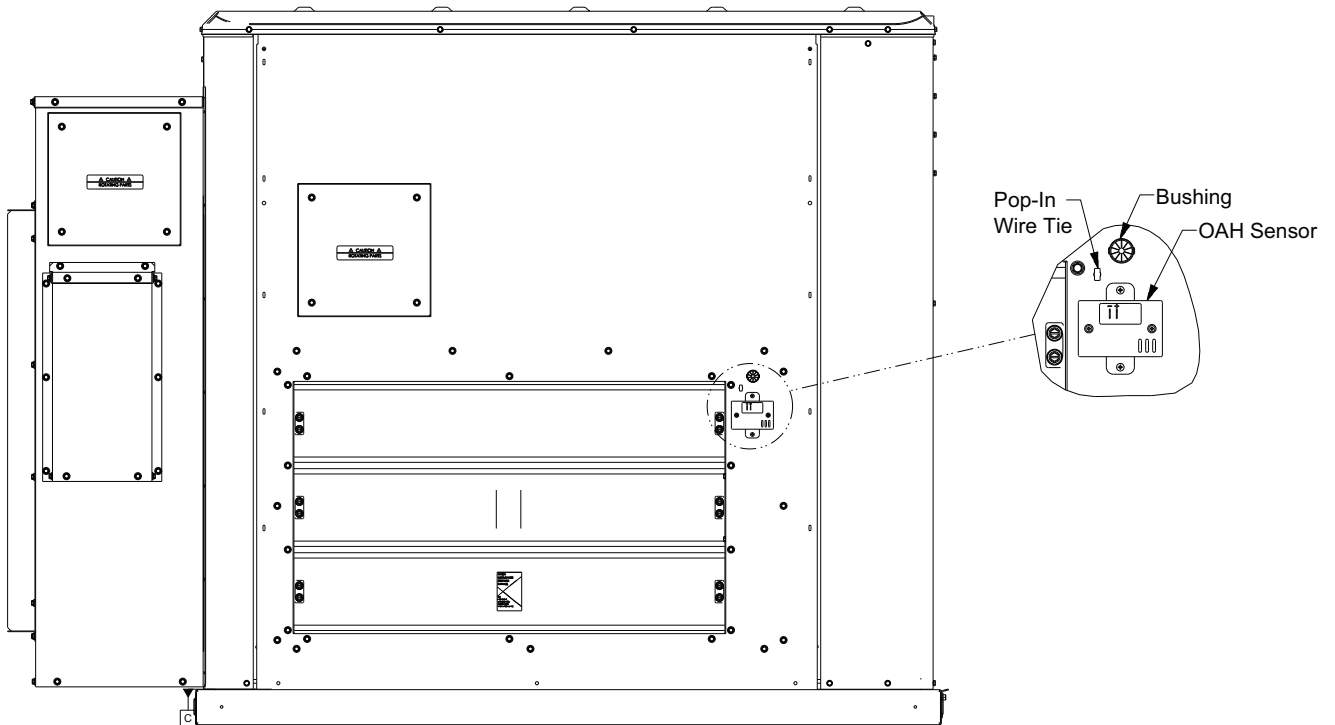
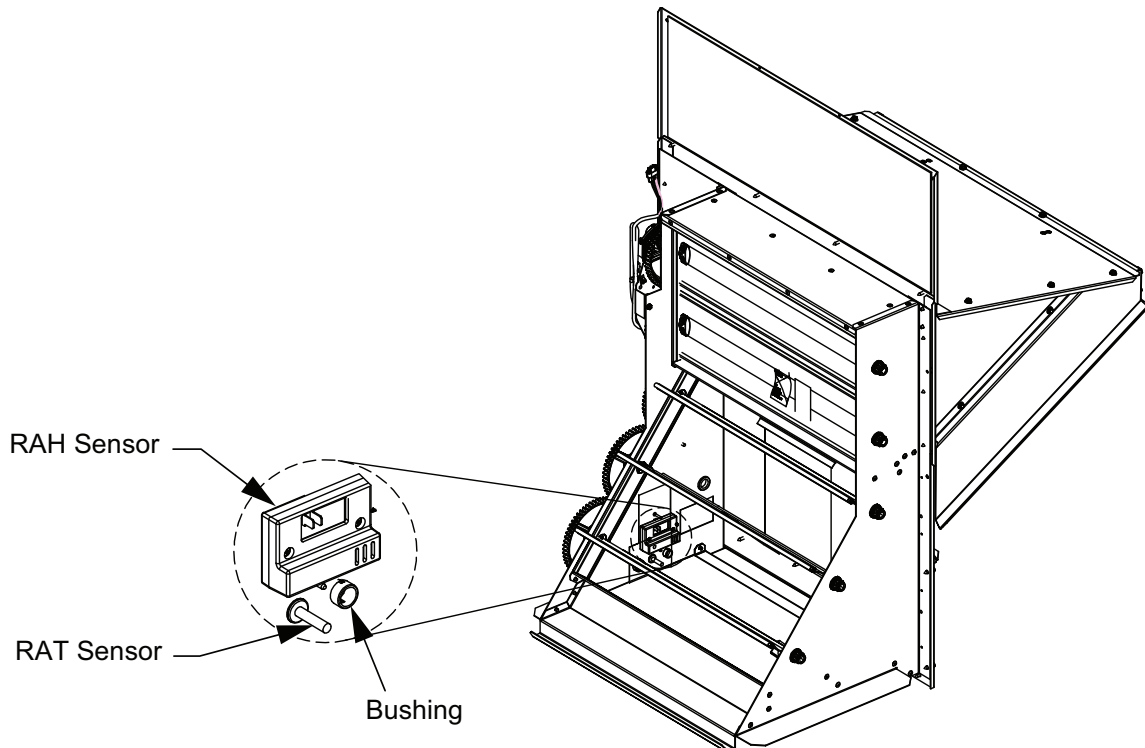


Figure 7. Return sensor location for A, B, and C cabinet downflow low leak economizer (digit 39 = A, B, C)



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Figure 8. Return sensor location for A, B, and C cabinet horizontal low leak economizer (digit 39 = A, B, C)

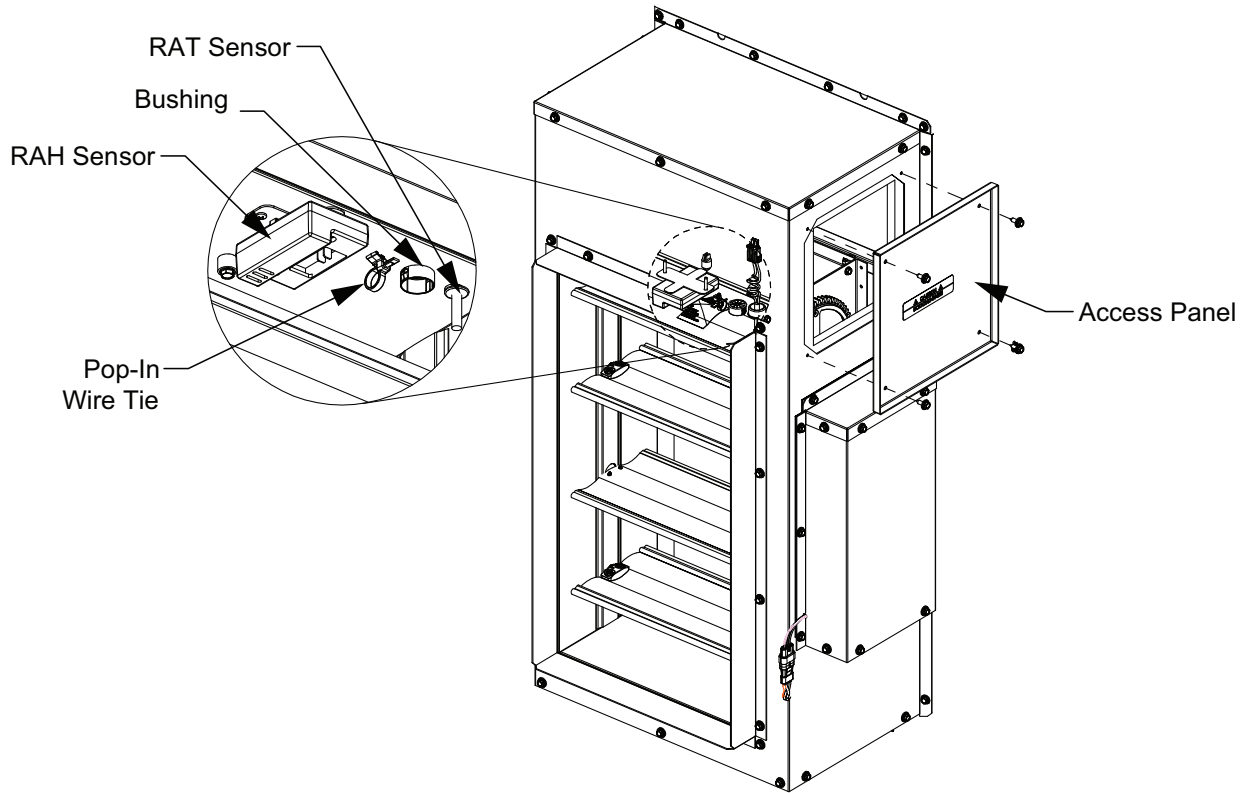
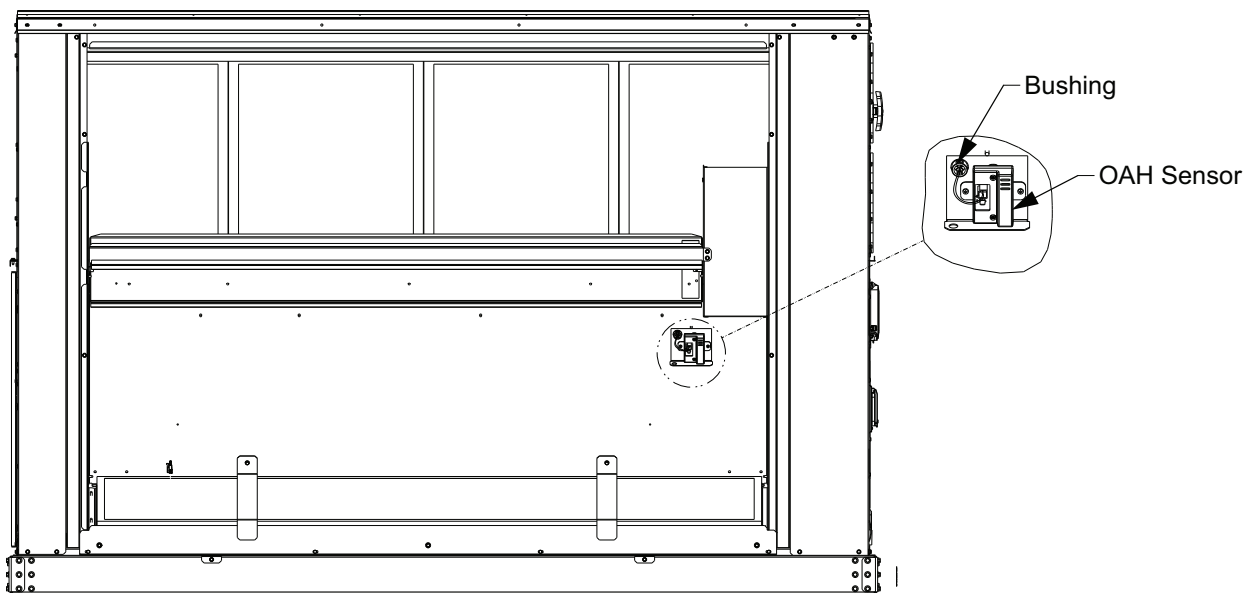


Figure 9. Outdoor sensor location for 12.5 to 25 ton standard economizer<sup>(a)</sup> (digit 39 = D)



(a) Uninstalled components are located in the return enclosure.



Figure 10. Return sensor location for 12.5 to 25 ton standard economizer (digit 39 = D)

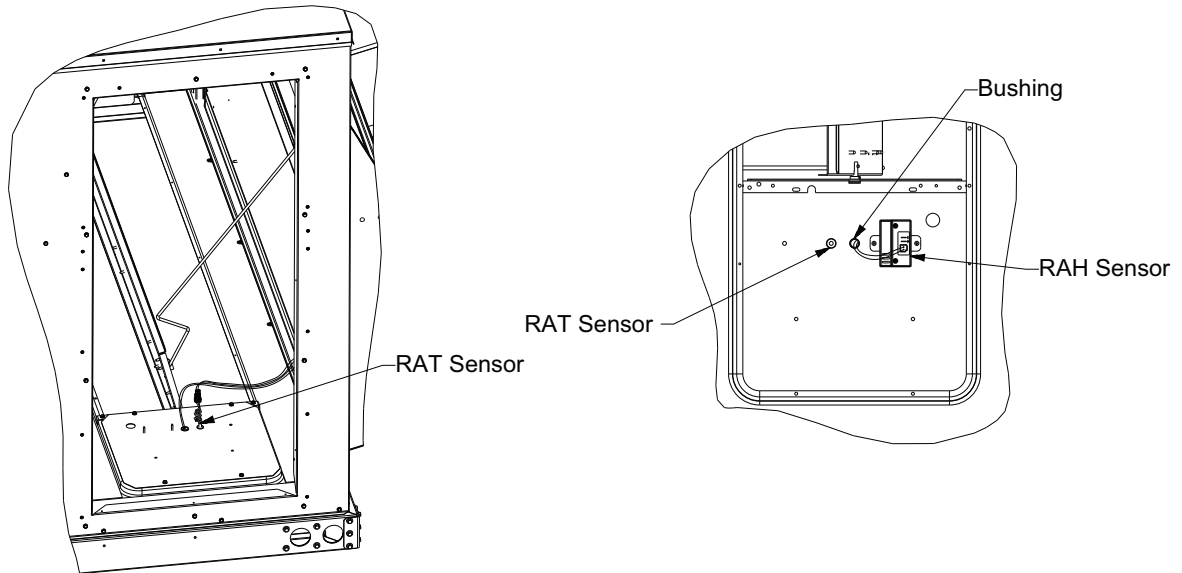
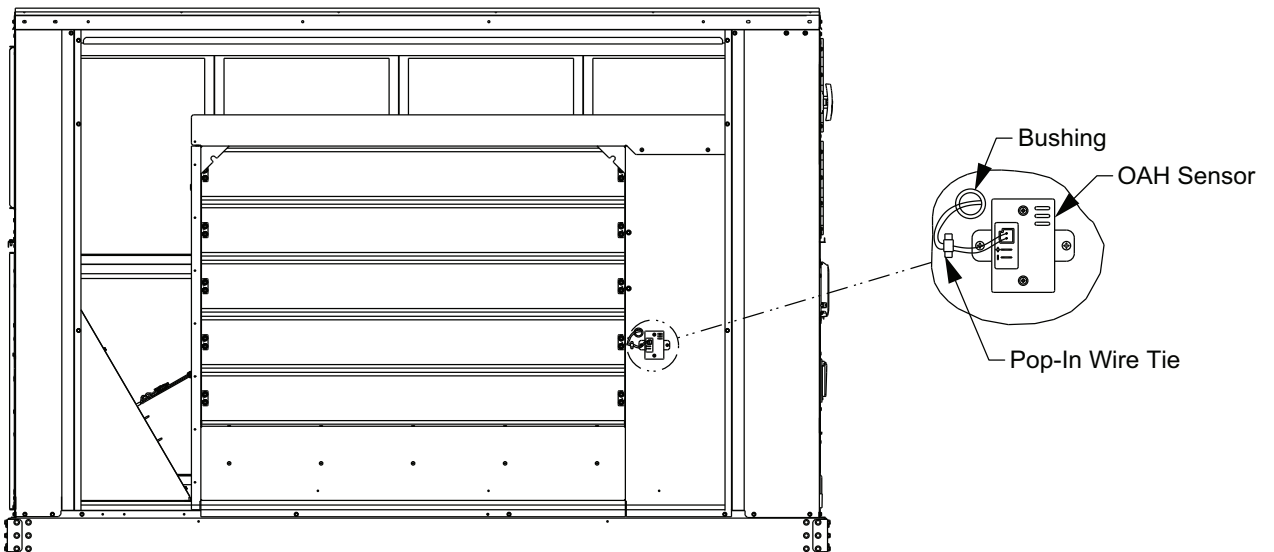


Figure 11. Outdoor sensor location for 12.5 to 25 ton low leak economizer (digit 39 = D)



## Installation

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Figure 12. Return sensor location for 12.5 to 25 ton low leak economizer – downflow (digit 39 = D)

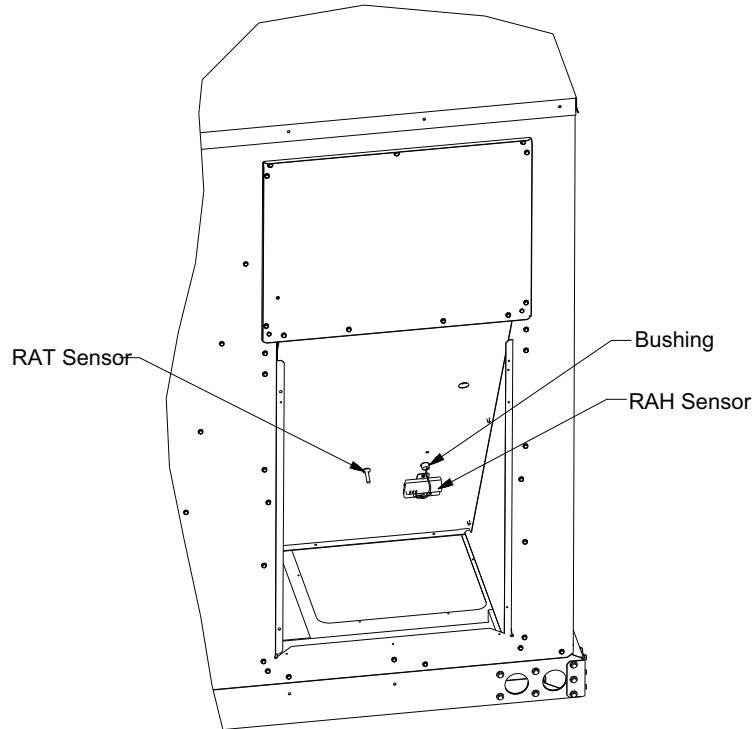
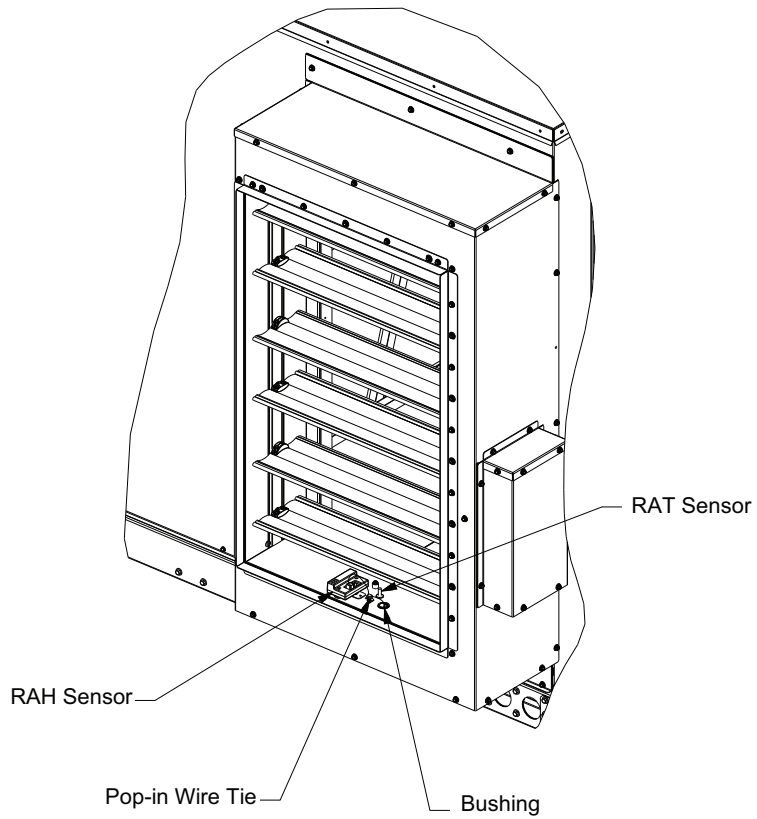


Figure 13. Return sensor location for 12.5 to 25 ton low leak economizer – horizontal (digit 39 = D)





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