Installation Instructions

Discharge Air Sensing Kit

Precedent™ Packaged Rooftop Units

Model Number:	Used With:
FIADAST003*	Precedent B cabinet (digit 39 = B) - T/WS*072-120
FIADAST004*	Precedent B cabinet (digit 39 = B) - Y/DS*072-120
FIADAST005*	Precedent C cabinet (digit 39 = C) - T/WS*150
FIADAST006*	Precedent C cabinet (digit 39 = C) - Y/DS*150
FIADAST007*	Precedent D cabinet (digit 11 = L, digit 39 = D), T/YS*180-300, T/YH*150-300, W/D/GS*150-300
FIADAST008*	Precedent D cabinet (digit 11 = 0/M/H/B/C/E/G/K/N/P/R, digit 39 = D), T/YS*180-300, T/YH*150-300, W/D/GS*150-300

⚠ 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.

August 2022 **ACC-SVN240A-EN**

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-including industry replacements for CFCs and HCFCs such as saturated or unsaturated HFCs and HCFCs.

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.**

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General Information

Notes:

- *An options board (FIAOPTN002*) must be installed in the unit for the this accessory to operate.*
- *Supply air sensing tube is standard on SZVAV, MZVAV, and economizer units.*

This discharge air sensing kit is designed to sense the supply air temperature downstream of the fan and/or heat exchanger.

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.
3. Visually inspect the components for shipping damage as soon as possible after delivery, before it is stored. Concealed damage must be reported within 15 days.
4. If concealed damage is discovered, stop unpacking the shipment.
5. Do not remove damaged material from the receiving location. Take photos of the damage, if possible. The owner must provide reasonable evidence that the damage did not occur after delivery.
6. Notify the carrier's terminal of damage immediately by phone and by mail. Request an immediate joint inspection of the damage by the carrier and the consignee.

Note: *Do not attempt to repair any damaged parts until the parts are inspected by the carrier's representative.*

Parts List

FIADAST003* T/W Models (digit 39 = B)

Quantity	Description
1	Temperature sensing module
7	Sensing tubes
3	Mounting brackets
1	Pipe insulation
16	Screws

FIADAST004* Y/D Models (digit 39 = B)

Quantity	Description
1	Temperature sensing module
5	Sensing tubes
4	Mounting brackets
1	Pipe insulation
16	Screws

FIADAST005* T/W Models (digit 39 = C)

Quantity	Description
1	Temperature sensing module
6	Sensing tubes
3	Mounting brackets
1	Pipe insulation
12	Screws

FIADAST006* Y/D Models (digit 39 = C)

Quantity	Description
1	Temperature sensing module
4	Sensing tubes
2	Mounting brackets
1	Pipe insulation
12	Screws

FIADAST007/8* (digit 39 = D)

Quantity	Description
4	Sensing tubes
1	Temperature sensing module (including Sensor bracket, Harness assembly, Insulation, Wire ties, Sensor bracket screw, and Cap to sensing tube screw connection)
1	Mounting bracket
4	Screws for mounting bracket to fan wall
3	Screws for sampling tube connections

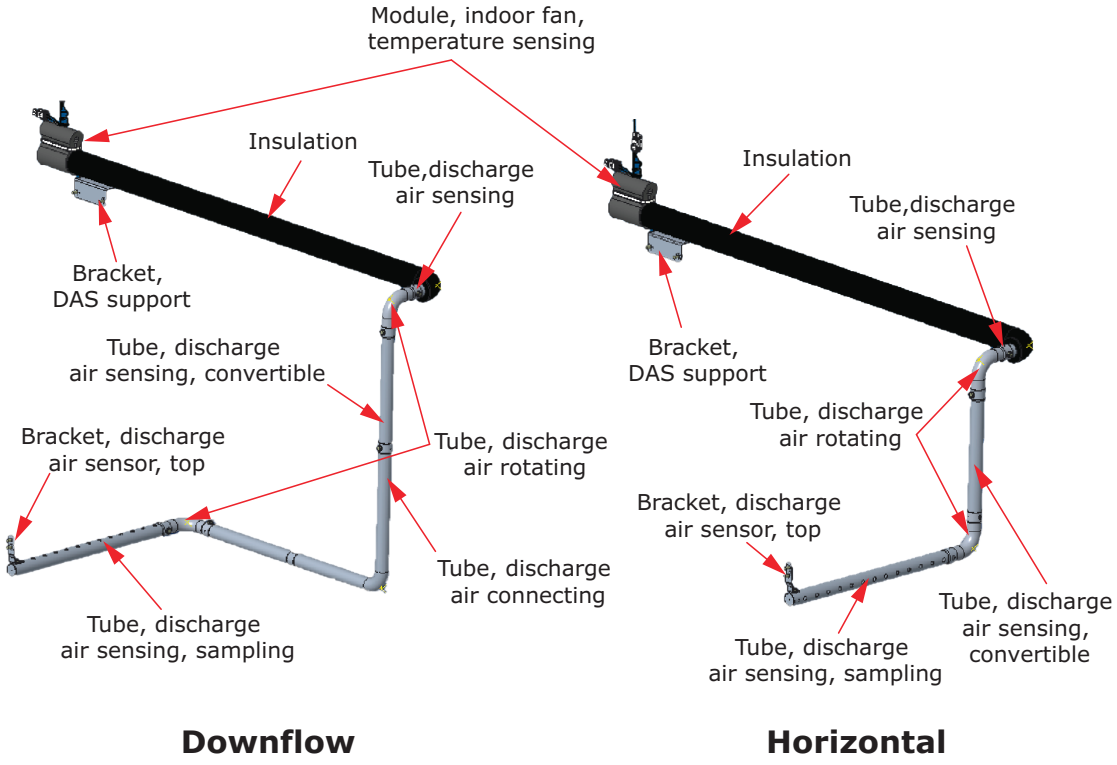
Installation

⚠WARNING

Hazardous Voltage!

Failure to follow instructions below could result in death or serious injury.
Power down the outdoor unit before making contact with the inverter circuit board. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized.Wait for at least 15 minutes to allow the unit to fully discharge high DC voltage. Confirm the unit is fully discharged using a CAT III or IV voltmeter rated per NFPA 70E.

Figure 1. T/WS*072-120 downflow and horizontal - FIADAST003 and FIADAST005 electric heat



Note: *See Figure 3 and Figure 4 for discharge air temperature.*

Figure 2. T/WS*150 downflow and horizontal

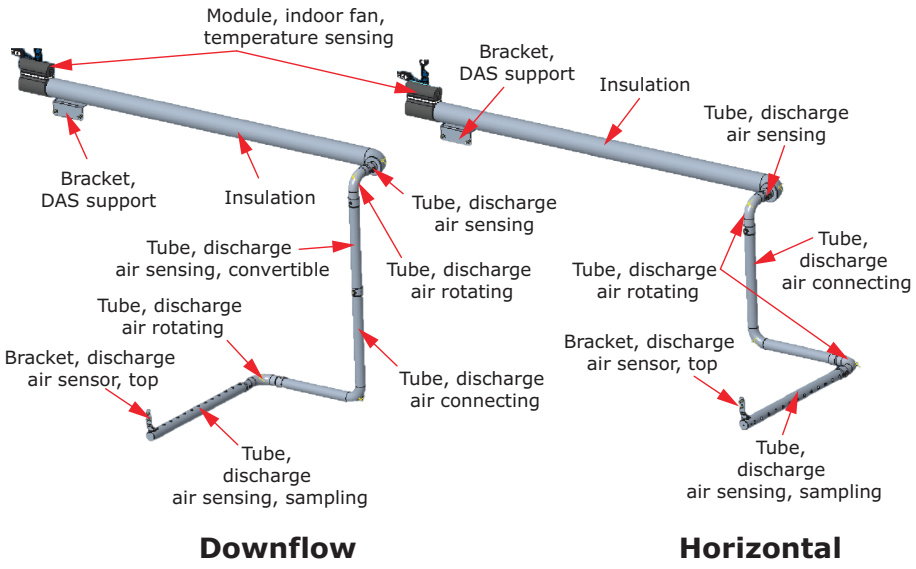


Figure 3. Discharge air temperature - downflow and horizontal - view 1

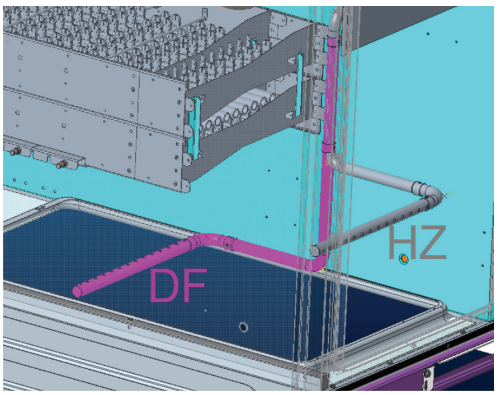


Figure 4. Discharge air temperature - downflow and horizontal - view 2

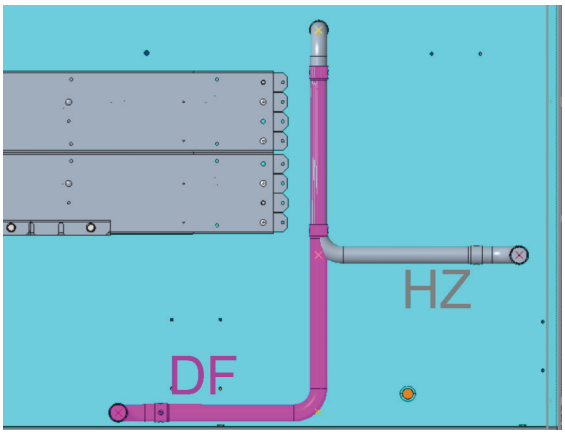


Figure 5. For model: D cabinet (digit 39 = D) downflow installation

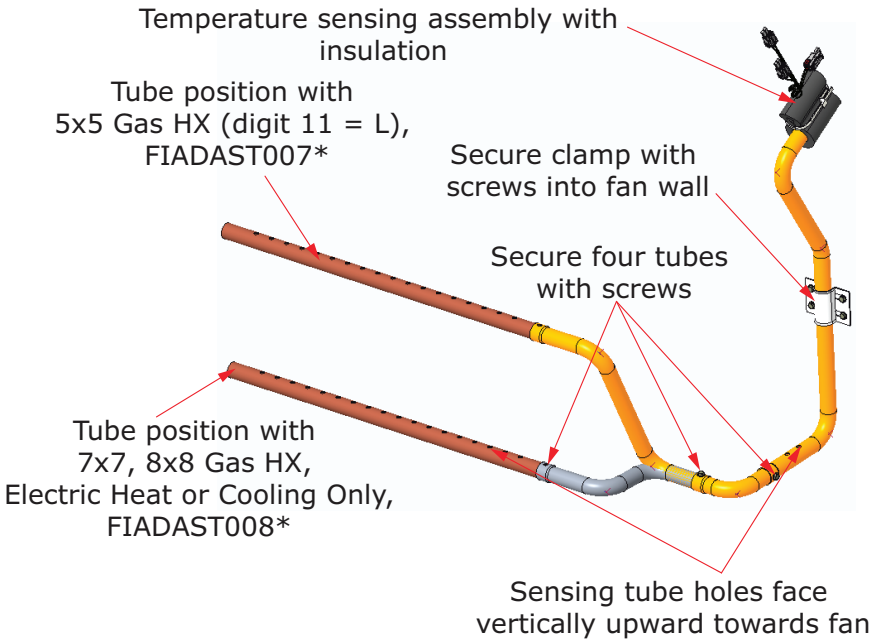


Figure 6. FIADAST004_B.0 and FIADAST006_C.0 - gas heat. See Figure 7.

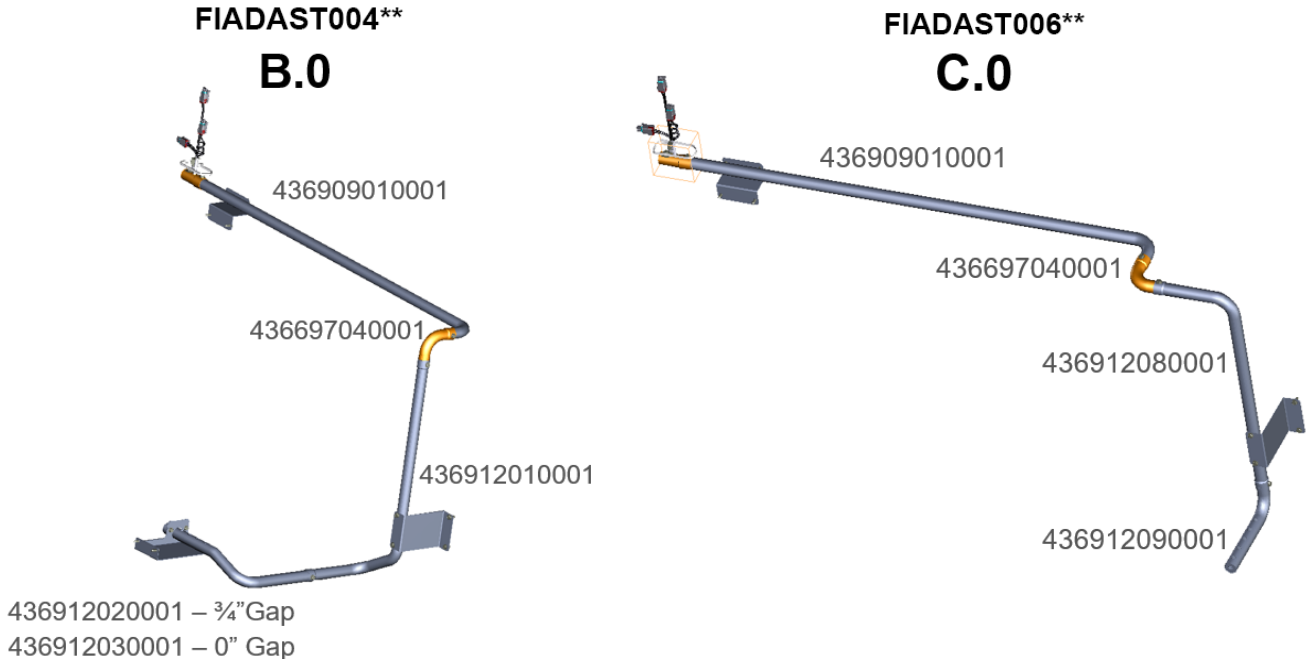


Figure 7. FIADAST004_B.0 and C.0 in machine

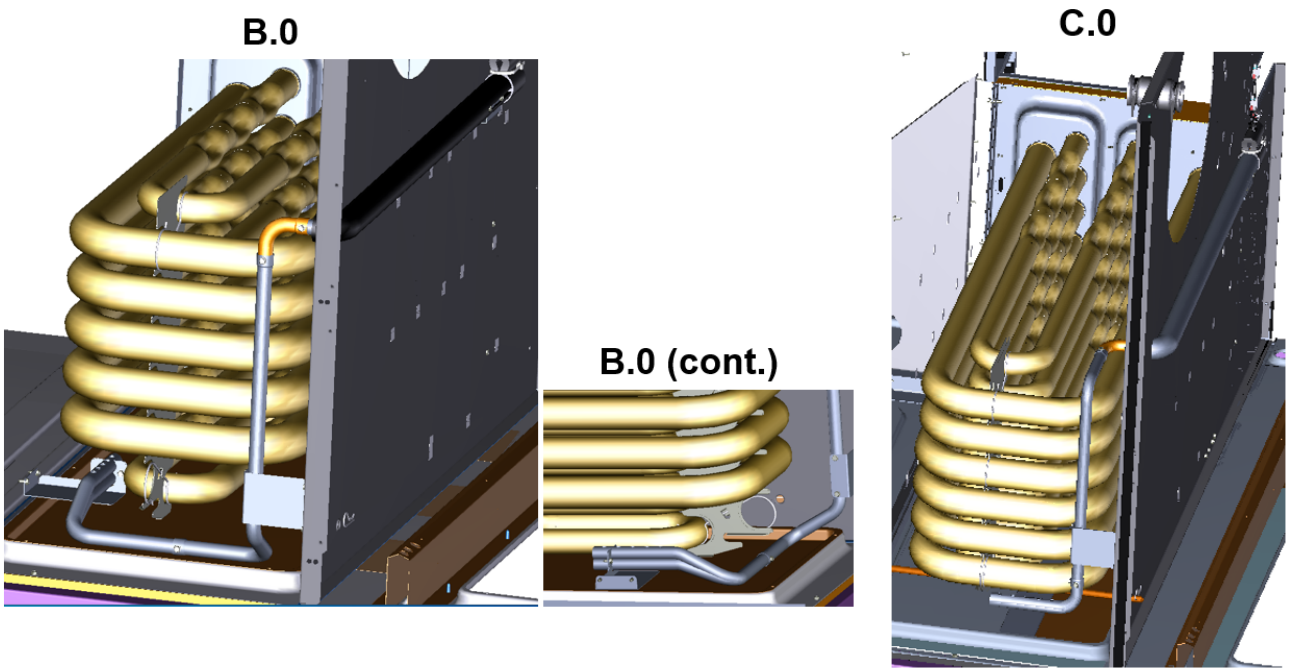


Figure 8. FIADAST004_B.0 and C.0 gap setting

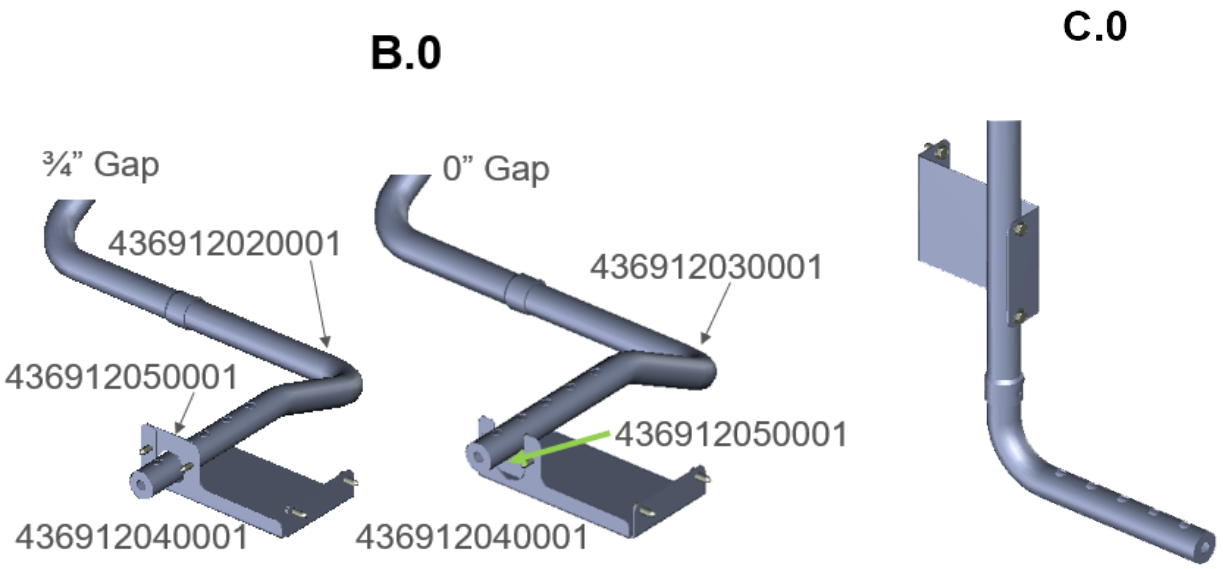
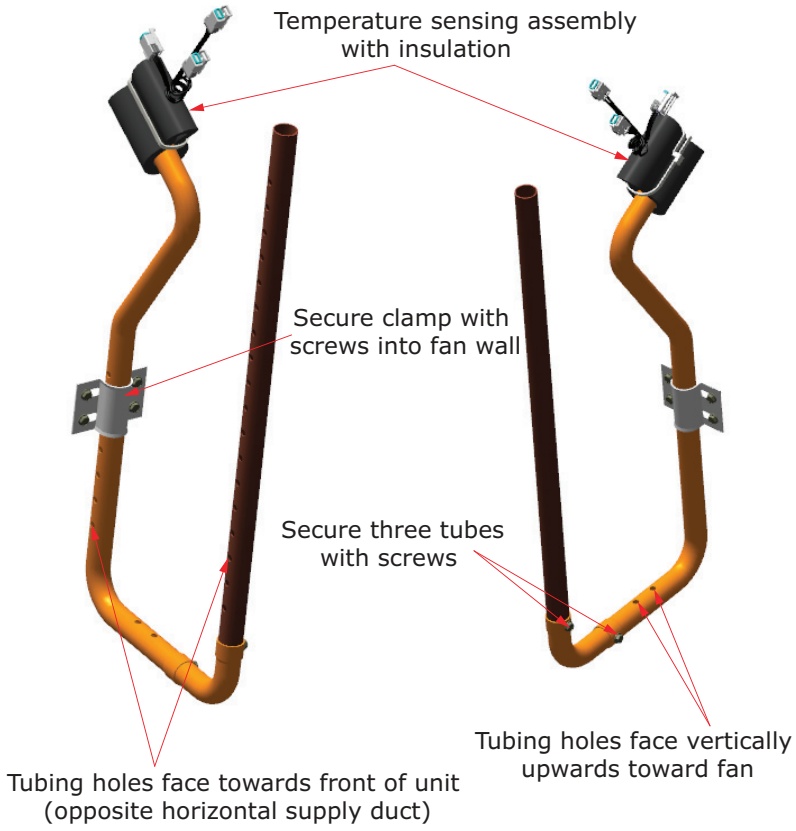


Table 1. Gap analysis chart – B.0 and C.0 cabinet

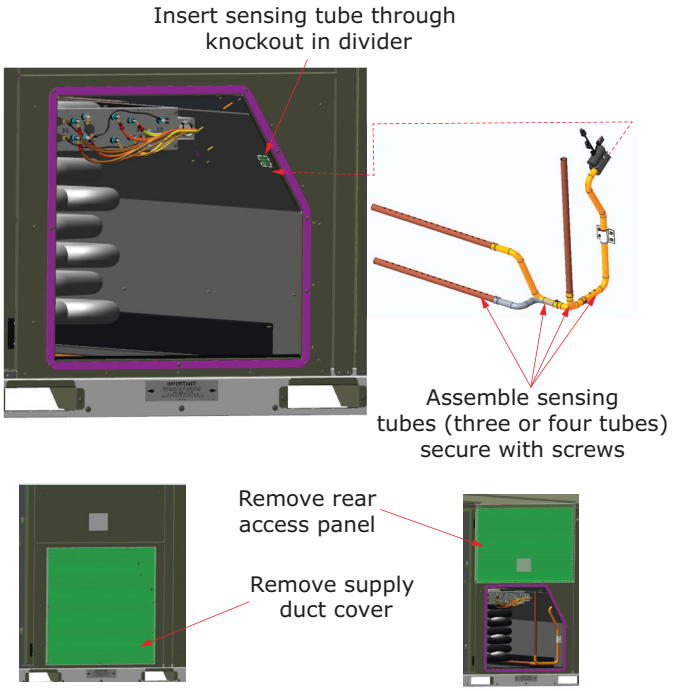
Heater Type	HZ Gap Low	DF Gap Low	HZ Gap Med	DF Gap Med	HZ Gap High	DF Gap High
TLSP; GAS heat, B0 Cabinet, 3x3, L2	3/4 inch	3/4 inch				
TLSP; GAS heat, B0 Cabinet, 3x4, L2	3/4 inch	3/4 inch	3/4 inch	3/4 inch		
TLSP; GAS heat, B0 Cabinet, 4x5, L2	3/4 inch	3/4 inch	3/4 inch	Tight	3/4 inch	Tight
TLSP; GAS heat, B0 Cabinet, 6x7, L2			3/4 inch	Tight	3/4 inch	Tight
TLSP; GAS heat, C0 Cabinet, 4x5, L3	1/8 inch	1/8 inch	1/8 inch	3/4 inch		
TLSP; GAS heat, C0 Cabinet, 6x7, L3					1/8 inch	1/8 inch

Figure 9. For model: D cabinet (digit 39 = D) horizontal installation



1. Turn the main power disconnect switch **OFF**.
2. Remove the filter access panel.
3. Remove the rear access panel directly above the horizontal supply duct cover. The sensor tube will hang from the fan divider wall with service access to the fan wall from both the rear access panel as well as access through the supply duct opening. Refer to Figure 14.
4. Remove the supply air duct cover on the rear side of the unit.
5. Install the sensing tube through the fan wall hole as shown in Figure 10.

Figure 10. For model: D cabinet (digit 39 = D), install sensing tube



6. Secure the mounting bracket to divider with four screws holding the sensing tubes in place against the fan wall as shown in the following figures.

Figure 11. For model: D cabinet (digit 39 = D) downflow installation

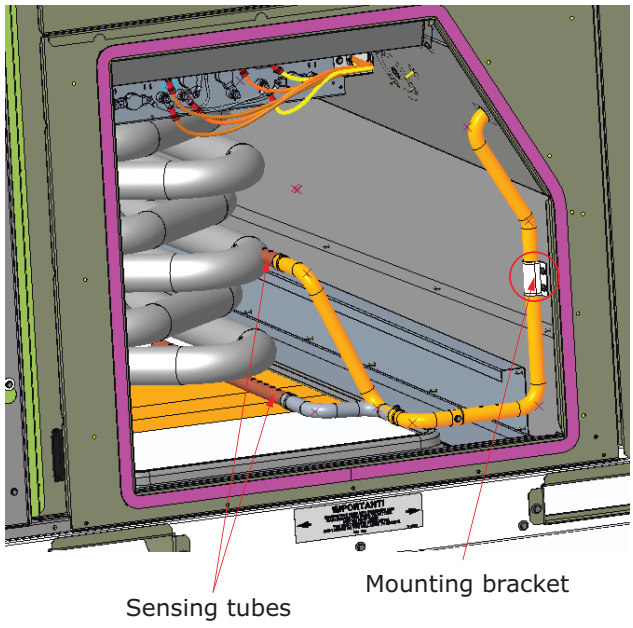


Figure 12. For model: D cabinet (digit 39 = D) horizontal installation

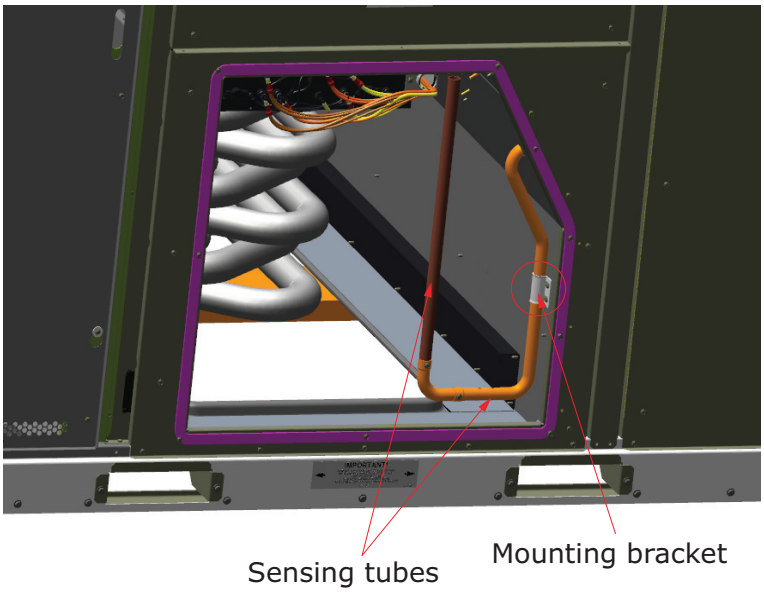
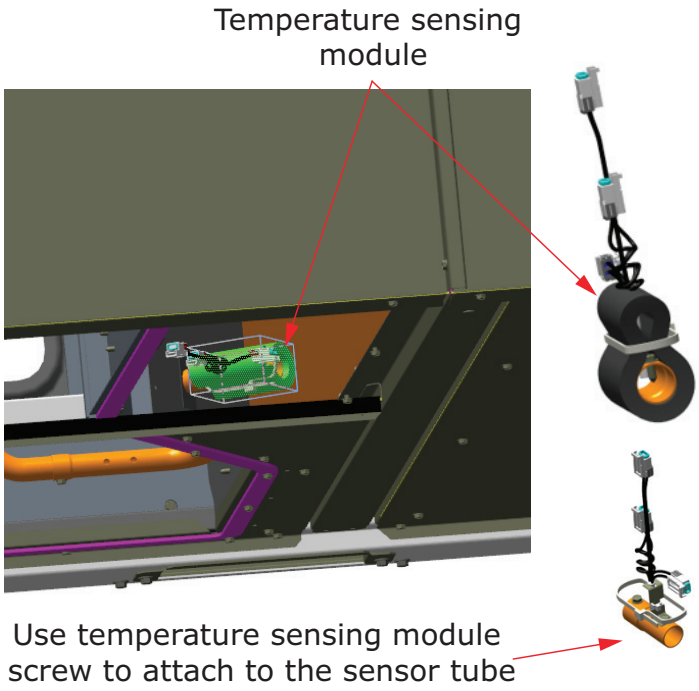
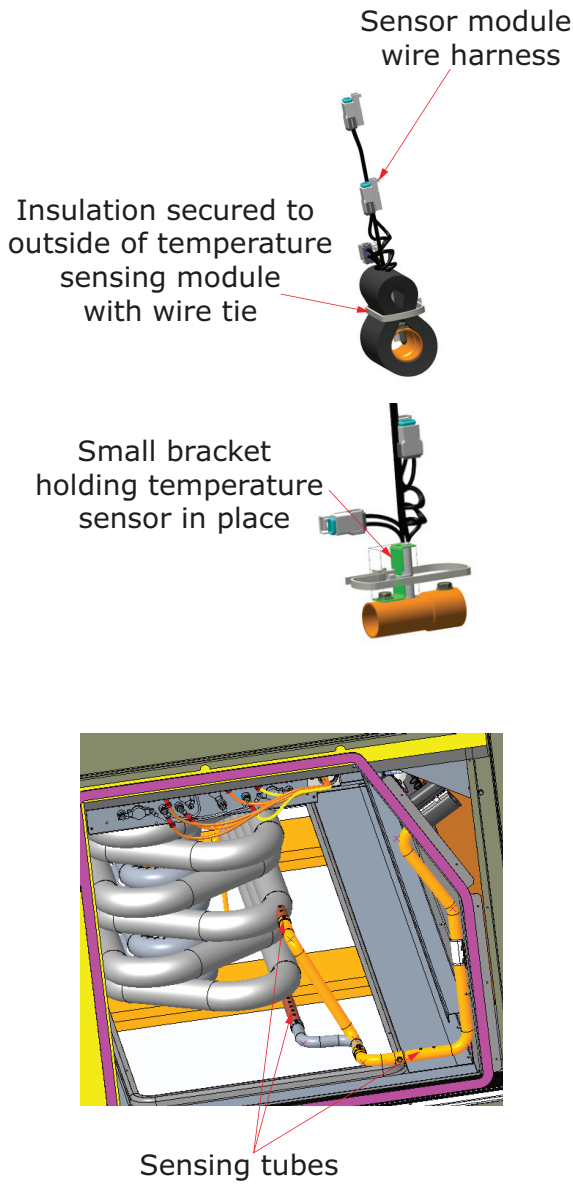


Figure 13. For model: D cabinet (digit 39 = D) sensor temperature sensing module installation



7. Move to the rear of the unit. First, ensure the temperature sensing module assembly matches Figure 13. Place the sensor assembly over the sensor tube. Secure sensor assembly to sensor tube with the single screw. Verify that insulation is installed around the temperature sensing assembly with a wire tie. See Figure 14.

Figure 14. Verify wire harness and insulation installed around temperature sensing assembly



Note: *See Figure 5 for sensing tube holes.*

8. Connect PPF177 which has been factory installed in unit and is located in the general area that the temperature sensor is being mounted to module assembly connector. Refer to the unit level schematics for full circuit layout. After installation is complete, the Symbio™ 700 UC configuration will need to be updated to enable this installed feature.
9. Replace access panels and duct cover.
10. Turn the main power disconnect switch to **ON**.

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