

SMOKE DETECTOR (FOR 3- 6 Ton)

INSTALLATION INSTRUCTIONS

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ATTENTION INSTALLING PERSONNEL

As a professional installer you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is **your** responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

This product is designed and manufactured to permit installation in accordance with national codes. It is the installer's responsibility to install this unit in accordance with national codes and/or prevailing local codes and regulations.



WARNING

HIGH VOLTAGE!

TO AVOID THE RISK OF ELECTRICAL SHOCK, WIRING TO THE UNIT MUST BE POLARIZED AND GROUNDED.



WARNING

HIGH VOLTAGE!

TO AVOID PERSONAL INJURY OR DEATH DUE TO ELECTRICAL SHOCK, DISCONNECT ELECTRICAL POWER BEFORE SERVICING OR CHANGING ANY ELECTRICAL WIRING.



IMPORTANT! READ THE INSTALLATION AND MAINTENANCE INSTRUCTIONS PROVIDED BY SYSTEM SENSOR BEFORE COMPLETING INSTALLATION IN THE GOODMAN® HVAC UNIT



WARNING

LIMITATIONS OF DUCT SMOKE DETECTORS!

THE NATIONAL FIRE PROTECTION ASSOCIATION HAS ESTABLISHED THAT DUCT DETECTORS MUST NOT BE USED AS A SUBSTITUTE FOR OPEN AREA DETECTOR PROTECTION AS A MEANS OF PROVIDING LIFE SAFETY. NOR ARE THEY A SUBSTITUTE FOR EARLY WARNING IN A BUILDING'S REGULAR FIRE DETECTION SYSTEM. THE SMOKE DETECTOR INSTALLED IN THIS UNIT IS TO BE USED IN CONJUNCTION WITH THE SAFETY SYSTEM(S) REQUIRED BY STATE AND LOCAL BUILDING AND FIRE CODES. REFER TO NFPA72 AND 90A FOR ADDITIONAL INFORMATION.

GENERAL INFORMATION

This installation and operating manual covers factory-installed smoke detectors for Goodman® Commercial package models. The detectors may be for supply and return air, supply air only or return air only. Refer to the Commercial Packaged Unit model nomenclature in the product installation and instruction manual to determine the detector setup. Technical specifications for the smoke detector sensor and control are listed in the System Sensor Installation and Maintenance Instructions included in the literature pack for each model.



DRYWALL DUST

If any unitary packaged air conditioning units are run during the drywall installation phase of any building under construction to accelerate the drying of joint compound, the subsequent sanding of those drywall joints and resulting dust may compromise the sensor heads in duct smoke detectors.

The 2D51 Sensor Head in the InnovairFlex™ Duct Smoke Detector models D4120, D4120W and D4S may exhibit a “maintenance” condition that will require cleaning of the sensing chambers on the sensor head or replacement of the sensor head. The “maintenance” condition is indicated at the fire alarm panel if present or on the sensor or power board of the duct smoke detector (the sensor LED will blink “red” every five seconds and the power board LED will blink “amber” every five seconds).

To avoid this condition, it is recommended that the sensor heads be removed during the construction phase and replaced once construction is completed and the Certificate of Occupancy is issued. The sensor head will twist out for removal and will twist in for insertion.

INITIAL SYSTEM INSPECTION

The smoke detector system must be inspected for proper assembly and structural integrity prior to unit start-up. Review the system photos and diagrams in this manual to verify smoke detector control and sensor mounting locations, tubing routing and mountings, wiring connections and that there is no damage to any components. The air sampling tubing and sensor(s) must be free of obstructions. The smoke detector must be fully tested upon installation and start-up.

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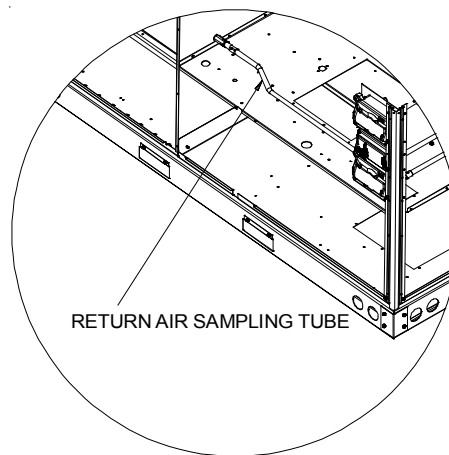
SUPPLY AIR SMOKE DETECTOR

If your unit is factory equipped with a supply air smoke detector, it is completely installed at the factory. Refer to System Sensor manual provided for testing or other details.

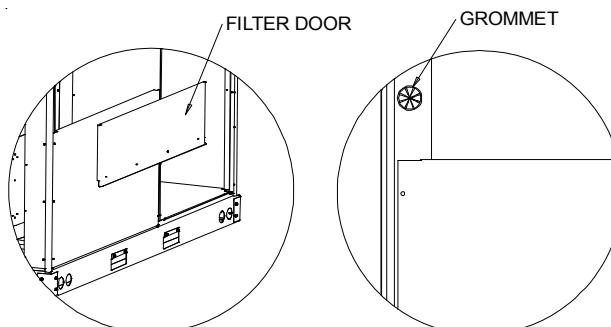
RETURN AIR SMOKE DETECTOR

If your unit is factory equipped with a return air smoke detector, the supplied return air sampling tube must be installed.

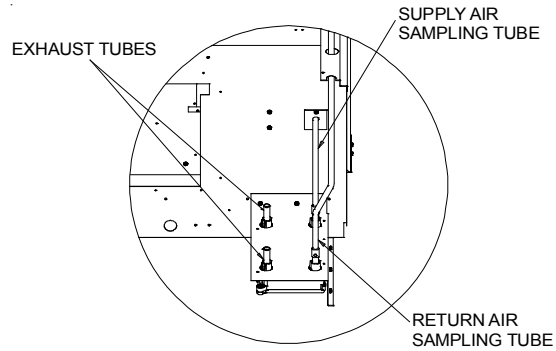
1. Take off the blower door and remove the return air tube taped to the blower deck.



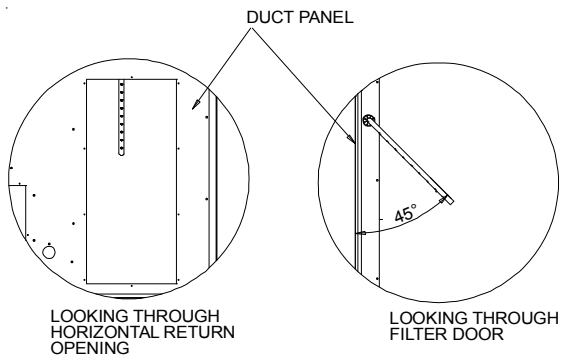
2. Take the sampling tube to the other side of the unit and remove the filter door.
3. Stick the plastic end of the sampling tube through the grommet that is located on the evaporator block off. Maneuver the tube through the grommet until you can reach the tube from the blower side of the unit.



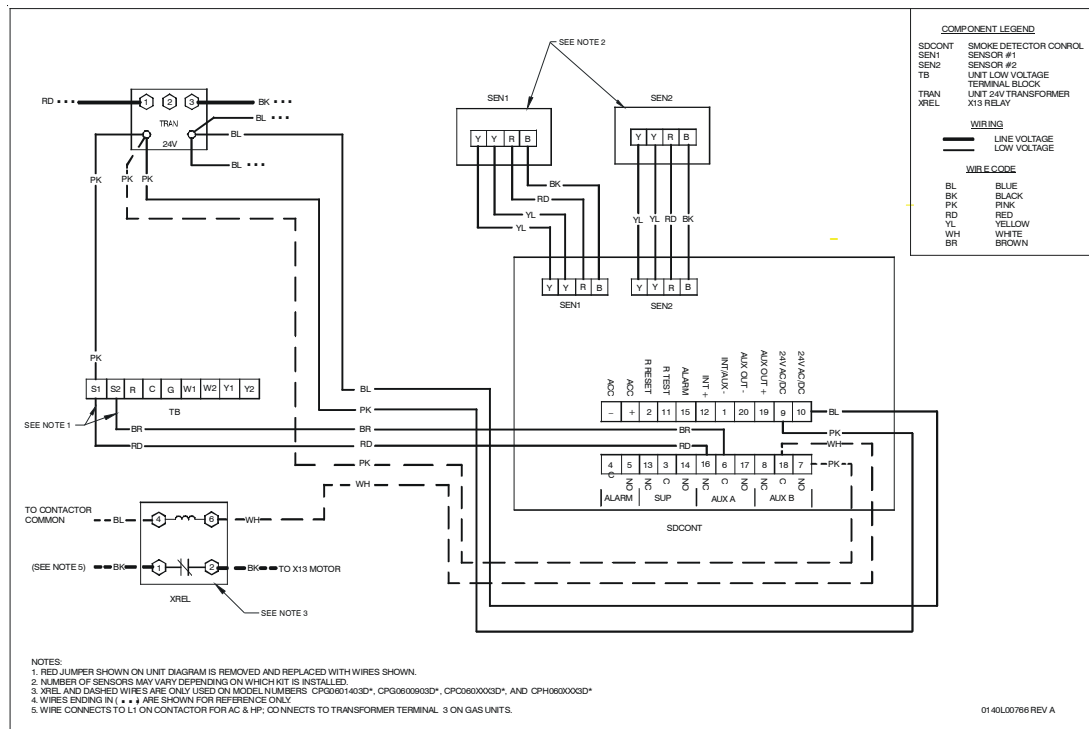
- Reach behind the smoke detectors and grab the tube. Snap the plastic end into the top sensor. Pull on the tube to make sure the plastic piece is fully snapped into the sensor.



- When finished, the part of the return tube with the holes should be at an approximate 45° angle to the duct panel. See figures below.



- Once the return tube is installed properly, refer to System Sensor manual provided for testing and other details.
 - Inspect the wiring between the control and the sensor(s).
- NOTE:** The wiring is factory installed but should be verified against the wiring diagram below.



8. A three position dip switch is located in the smoke detector control unit.
 - a. The first switch is used to determine if there are one or two sensors connected to the power board.
 - b. The second switch selects an instantaneous or 7 minute tamper delay. **This has been factory set for the 7 minute delay.**
 - c. The third switch is used to turn the "Shutdown on Trouble" feature on or off. **This has been factory set for on.**

MAINTENANCE

The smoke detector system must be tested upon installation. To insure proper operation, the smoke detector system must be maintained and tested on a regular basis. It is recommended that the smoke detector system be tested every time the unit's filters are replaced. The sensor should be cleaned at least once a year. If the unit contains both supply and return air smoke detectors then both detectors require testing and cleaning. For detector check procedures, cleaning procedures, alarm test procedures and troubleshooting, refer to the System Sensor Installation and Maintenance Instructions.

If a remote control panel is not used it is highly recommended that an accessory remote test station be used for improved monitoring and testing capability. The accessory remote test station can be obtained from System Sensor®.

DETECTOR STATUS

Detector status is indicated by the LED sensor and the corresponding LED on the power board. The power board has two separate LED's to indicate the status of each sensor connected to it. For more information about detector status indication refer to the System Sensor Installation and Maintenance Instructions.

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