

Installation Instructions

Gas Heat Exchanger Replacement

Model Numbers:

(Y, D)SK*(036-060)S(0, A)(L, M, H)

YHK*036S(0, A)(L, M, H)

Precedent™ A cabinet, 3 to 5 tons, Gas heat models (digit 1 = Y/D, digit 39 = A)

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.

January 2025

PART-SVN268A-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.

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 Labelling 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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General Information

Model Number Description

All products are identified by a multiple-character model number that precisely identifies a particular type of unit. Its use will enable the owner/operator, installing contractors, and service engineers to define the operation, specific components, and other options for any specific unit.

When ordering replacement parts or requesting service, be sure to refer to the specific model number and serial number printed on the unit nameplate.

Tools Required

- 5/16-inch Nut Driver
- 5/16-inch Nut Long Driver (12 to 15-inch)
- 5/16-inch Ratchet

- Ratchet Extension
- Tube of RTV — Maximum temperature rating of 500°F (field supplied)
- Blade/Cutter

Parts List

Table 1. Parts list

Qty	Description
1	Gas Heat Exchanger
1	Rear 0.88 ID Tube Foam Block Enclosure
1	Tube Insulation - 7/8 in. OD × 3/8 in. Thick × 18 in. Long

Replacement Procedures

⚠ WARNING

Hazardous Voltage and Gas!

Failure to turn off gas or disconnect power before servicing could result in an explosion or electrocution which could result in death or serious injury.

Turn off the gas supply and disconnect all electric power, including remote disconnects, before servicing the unit. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized.

⚠ WARNING

Hazardous Gases and Flammable Vapors!

Failure to observe the following instructions could result in exposure to hazardous gases, fuel substances, or substances from incomplete combustion, which could result in death or serious injury. The state of California has determined that these substances may cause cancer, birth defects, or other reproductive harm.

Improper installation, adjustment, alteration, service or use of this product could cause flammable mixtures or lead to excessive carbon monoxide. To avoid hazardous gases and flammable vapors follow proper installation and setup of this product and all warnings as provided in this manual.

1. Shut off all electrical power to unit.
2. Shut off and disconnect gas service to unit.
3. Disconnect any piping from unit condensate drain.
4. Remove all access panels, front center posts, and rear duct cover.
5. If the unit is configured for horizontal supply, remove the connecting ductwork.
6. Remove condensate drain pan.
7. Clip any wire ties those secure wires to one another in the gas heat compartment. Be careful not to damage any wiring when doing this.
8. Disconnect wires from the various components in the gas heat compartment (TCO1, Pressure Switch, Gas Valve, etc.).
9. Route wires out of gas heat compartment through harness routing holes. Be sure NOT to discard any foam insulation if used to plug hole.
10. Remove the high voltage spark ignition wire from the igniter.
11. Disconnect the pressure switch orange silicone hose from the vestibule.
12. Open the control box access panel. Remove screws shown in the [Figure 1, p. 6](#) to remove two sheet metal parts.
13. Remove the gas valve, manifold tube, and burner assembly by removing four screws as shown in [Figure 2, p. 6](#).
14. Remove TCO1 limit and pressure switch as shown in [Figure 2, p. 6](#).
15. Remove the inducer motor shown in [Figure 2, p. 6](#).
16. Discard the gasket behind the combustion blower. (Use gasket provided with the kit when installing the new gas heat exchanger.)
17. Remove the air orifice. Retain for reinstallation.

Figure 1. Sheet metal parts and screw locations

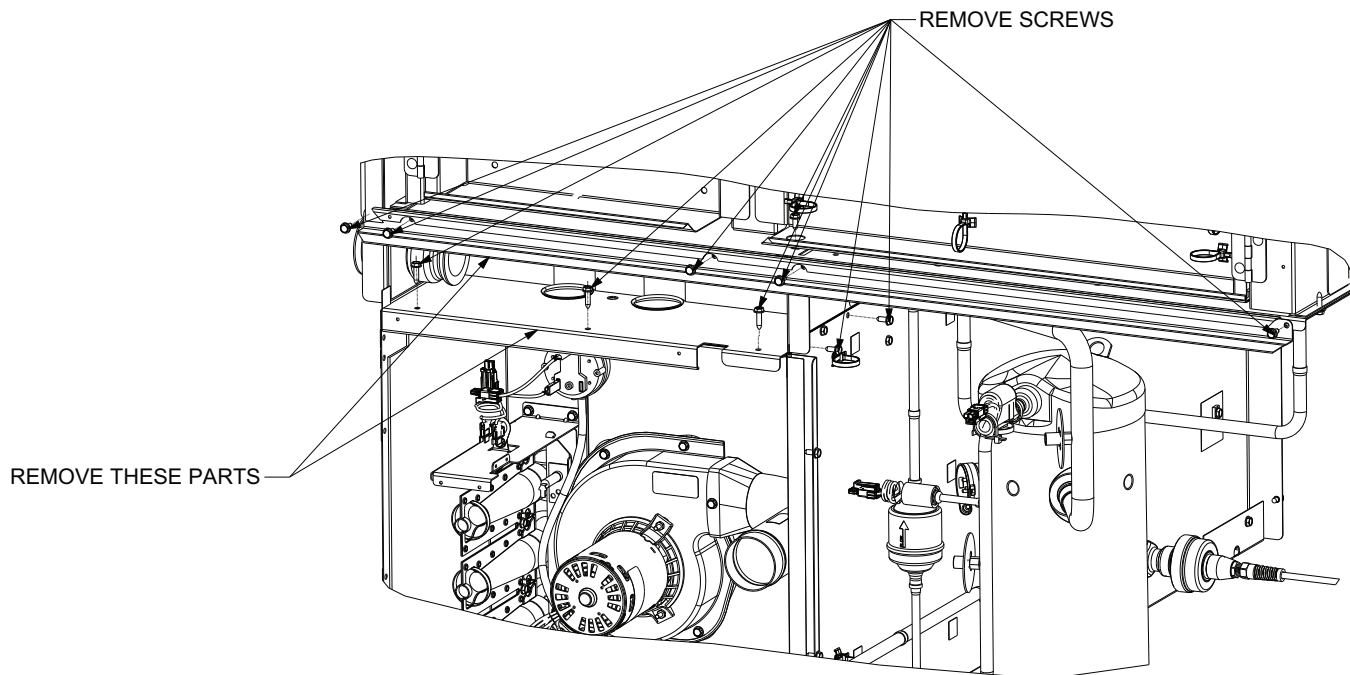
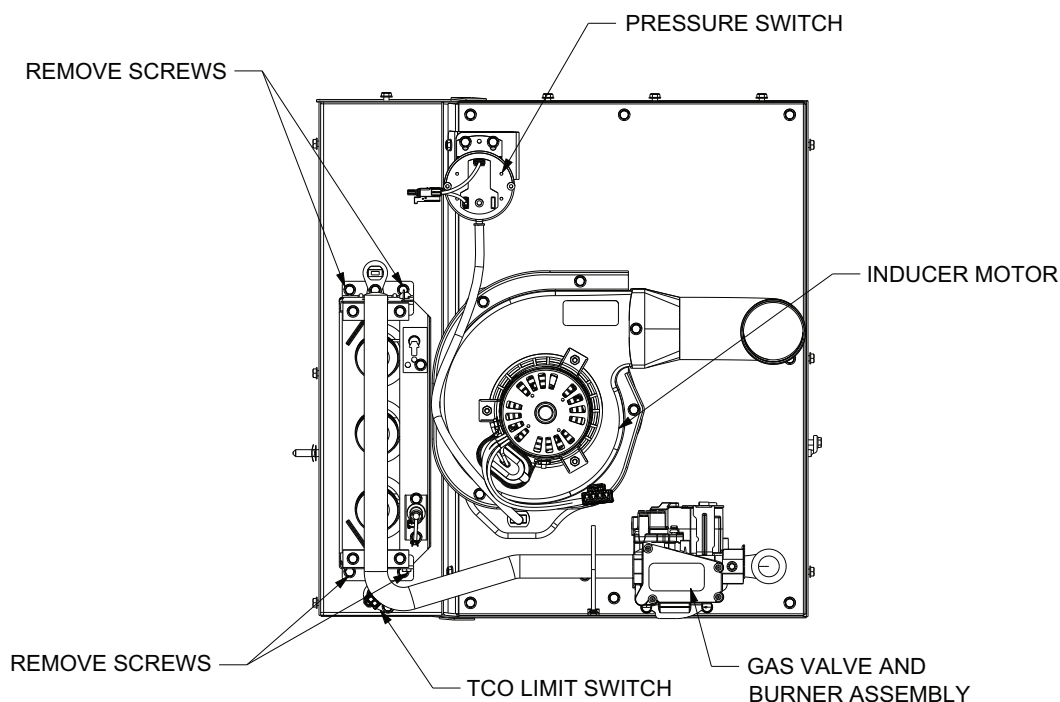


Figure 2. Gas heater component locations



18. Remove ten screws from the vestibule to remove the heat exchanger assembly. See [Figure 3, p. 7](#), [Figure 4, p. 7](#), [Figure 5, p. 7](#), and [Figure 6, p. 7](#).
 - a. Remove two foam blocks (front and rear) covering the refrigeration tubes to access three screws at the top the heat exchanger vestibule as shown in [Figure 4, p. 7](#).

1. Retain the foam blocks.
2. Use a blade/cutter if necessary to break the foam block.
3. Disconnect the wires and route wires out of this compartment through harness routing holes, if necessary.

- b. Remove the unit roof to access the fourth screw.
- c. Three screws can be directly accessed from each indoor coil and compressor side of the vestibule.

Figure 3. Vestibule screw locations

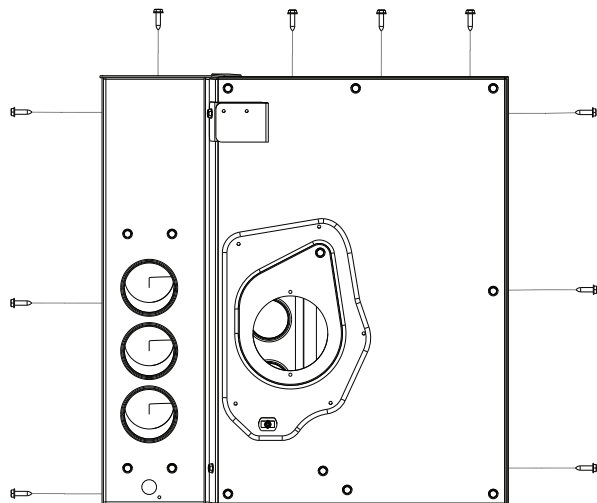


Figure 4. Foam block location

REMOVE THE FOAM BLOCKS

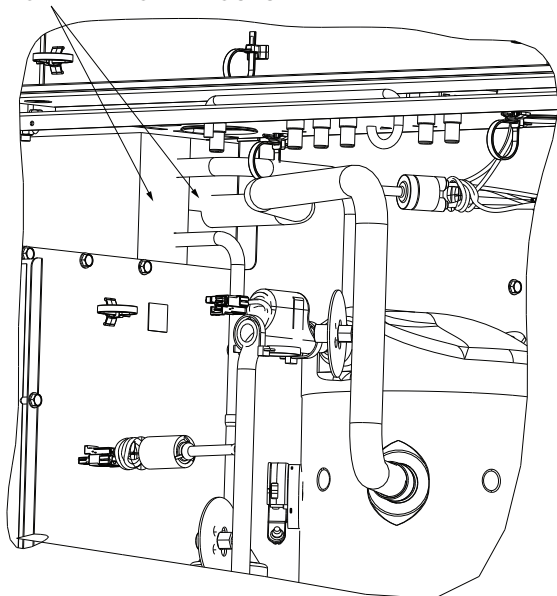


Figure 5. Screw locations at the top of the vestibule

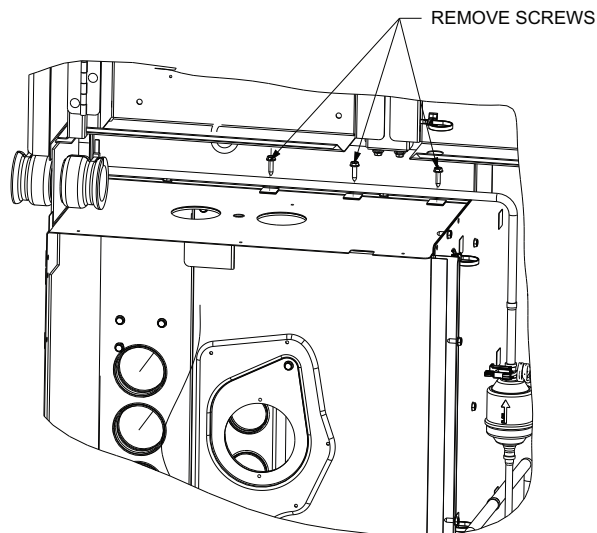
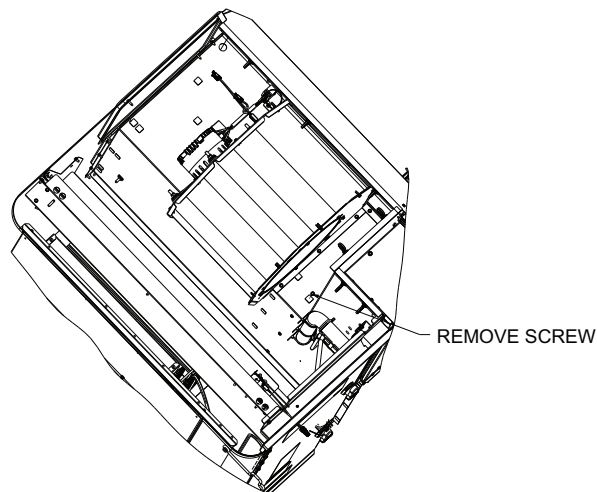


Figure 6. Screw location at the top of the vestibule



19. If necessary, remove the heat exchanger support rod by removing the tinnerman clip on the indoor coil side of the heat wrapper and the screw on the outer side of the divider panel.
20. Using two people to prevent damage, push the heat exchanger out from the rear supply duct through the front of the unit.
21. Reinstall the support rod if it was removed during heat exchanger removal.
22. Install the new heat exchanger. Use two people to prevent damage, feed heat exchanger through the front of the unit. The second person should align the heat exchanger from the rear duct opening of the unit.
23. Verify the heat exchanger catches the support rod between the bottom primary tube and the tube directly above it.

Replacement Procedures

24. Seal the heat exchanger with a bead of high temperature silicon (field supplied). See [Figure 7, p. 8](#).
25. Use field supplied tube insulation to cover the exposed rear side refrigeration tube. Secure insulation with cable ties (field supplied).
26. Install the sheet metal parts removed in [Step 11](#). See [Figure 1, p. 6](#).
27. Cut the rear foam block into small manageable pieces (~ 0.5-inch thick) to seal the gap to prevent air leakage on either end of the tubes. See [Figure 8, p. 8](#).
28. Use front foam block to cover the front tubes.
29. Reassemble the unit by reversing steps 18 back to 1.

Figure 7. Seal heat exchanger sides

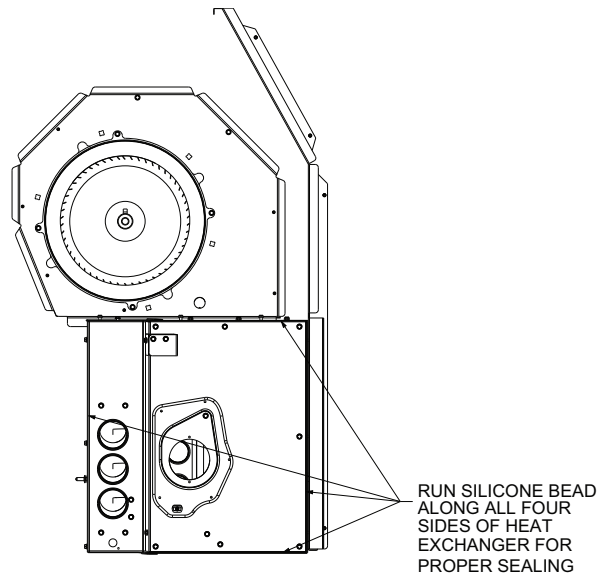
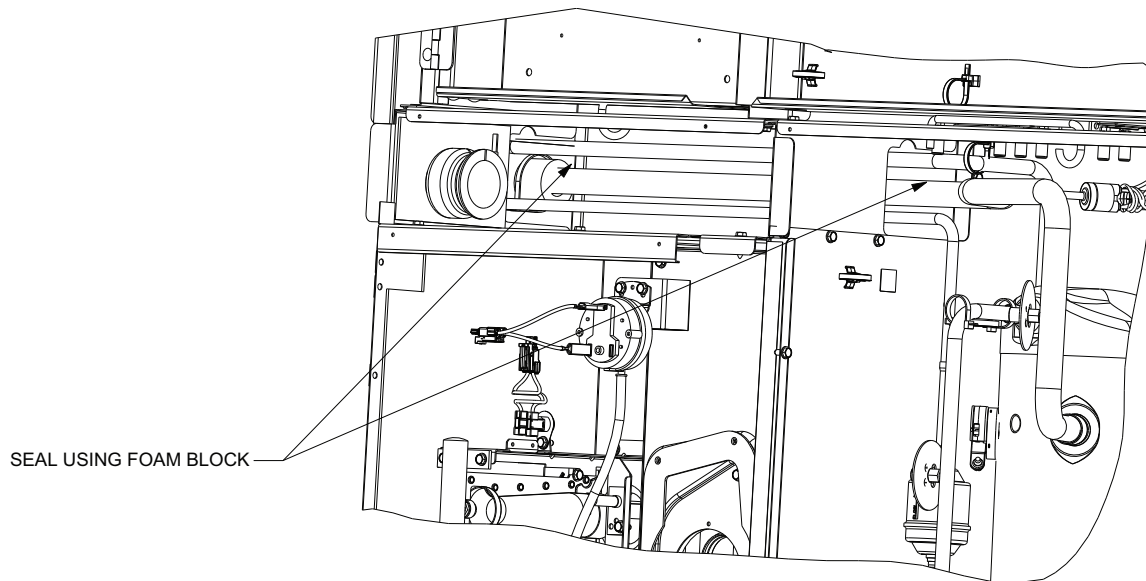


Figure 8. Seal the gap using foam block pieces



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