

REPLACEMENT INDUCER MOTOR ASSEMBLY KIT

Installation Instructions

NOTE: Read the entire instruction manual before starting installation.

SAFETY CONSIDERATIONS

WARNING

FIRE, EXPLOSION, ELECTRICAL SHOCK AND CARBON MONOXIDE POISONING HAZARD

Failure to follow instructions could result in personal injury, death, or property damage.

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury, or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Untrained personnel can perform basic maintenance functions such as cleaning and replacing air filters. All other operations must be performed by trained service personnel. When working on heating equipment, observe precautions in the literature, on tags, and on labels attached to or shipped with the unit, and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions include in literature and attached to the unit. Consult local building codes, the current editions of the National Fuel Gas Code (NFGC) NFPA 54/ANSI Z223.1 and the National Electrical Code (NEC) NFPA 70.

Wear safety glasses and work gloves. Have a fire extinguisher available during start-up, adjustment procedures, and service calls. Recognize safety information. This is the safety alert symbol. . When you see this symbol on the furnace and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, CAUTION, and NOTE. The words DANGER, WARNING, and CAUTION are used with the safety-alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards which could result in personal injury or death. CAUTION is used to identify unsafe practices which would result in minor personal injury, or product and property damage. NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

INTRODUCTION

This instruction covers the inducer motor assembly installation on non-condensing, 33.3-inch (846 mm) high, Low NOx, mid-efficiency hot surface ignitor units. The inducer should be replaced when the motor is seized or when the windings are open, shorted or grounded.

DESCRIPTION AND USAGE

The Inducer Motor Assembly Replacement Kit can be utilized to restore units having inducer assemblies that require repair. This kit contains the following items: A complete inducer motor assembly, inducer motor mounting gasket, and screws.

INSTALLATION

Step 1 — Remove Inducer Motor Assembly

1. Turn off electric supplies to unit and set thermostat to lowest setting or "OFF". More than one disconnect may be required to disconnect power to unit.

WARNING

ELECTRICAL SHOCK AND FIRE HAZARD

Failure to follow this warning could result in personal injury, death, and/or property damage.

Turn off the gas and electrical supplies to the furnace and install lockout tag before performing any installation or modification. Follow the operating instructions on the label attached to the furnace.

2. Turn off gas at external shut-off.
3. Remove exterior door.
4. Turn off electric switch on gas valve to "OFF."

CAUTION

PERSONAL INJURY HAZARD

Failure to follow this caution may result in personal injury.

Inducer is close to Vent Elbow assembly. Vent Elbow, Vent Connector or Inducer Motor may be hot. Allow vent elbow and inducer to cool before servicing.

5. Disconnect pressure hose from inducer assembly choke plate.
6. Unplug Inducer motor wires from wiring harness.
7. Disconnect draft safeguard switch leads from draft safe-guard switch at vent elbow.
8. Disconnect and remove vent connector from vent elbow.
9. Remove three screws securing vent elbow, and remove vent elbow from inducer assembly. Retain screws for use during reassembly.
10. Disconnect the gas supply pipe from the gas valve, and re-move pipe from furnace casing.

NOTE: Use a backup wrench on the gas valve to prevent the valve from rotating and damaging mounting bracket and/or gas manifold tube.

11. Disconnect wires from terminals on gas valve.
12. Remove gas valve mounting bracket screws.
13. Slide gas valve and manifold pipe assembly out of burner inlet elbow and set aside.
14. Remove screws securing inducer assembly to the inducer choke plate and screw securing outlet elbow (if present) and pull inducer assembly away from unit.
15. Remove any gasket residue from the inducer choke plate.
16. Clean pressure tube port on choke plate with a wire or small drill bit. If water is present in tube, remove tube from transducer and clean. If cracked or broken, replace tube.

NOTE: Water in the pressure switch tubing indicates condensed water vapor from the flue gas or water leaking in through the vent or flashing. Water collecting in the vent system must be corrected. Refer to the System Check-Out procedures below for assistance in determining the cause of the condensed water vapor.

Step 2 — Installation of Inducer Motor Assembly

1. Verify old inducer motor gasket is removed from inducer choke plate.

NOTE: A new inducer motor assembly gasket is provided in the inducer motor assembly kit. See Fig. 1.

2. Place new inducer motor gasket (provided in kit) on choke plate. Use a small piece of tape to temporarily hold gasket in place during inducer motor assembly.

CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in personal injury.

Do not use RTV in place of inducer gasket. RTV may flow on to inducer wheel, creating an out-of-balance condition, which may cause premature failure of the motor.

3. Align inducer motor assembly with mounting holes, and attach to choke plate using screws provided.
4. Slide gas valve and manifold pipe assembly into burner inlet elbow.
5. Install gas valve mounting bracket screws, assuring that green/yellow ground screw is secured under one of the screws.
6. Reconnect gas valve wires to the terminals on the gas valve.
7. Insert the gas supply pipe through the grommet in the casing. Apply a thin layer of pipe dope to the threads and thread into gas valve.

NOTE: Use a backup wrench on the gas valve to prevent the valve from rotating and damaging mounting bracket and/or gas manifold tube.

8. With a backup wrench on the inlet boss of the gas valve, tighten gas supply pipe to gas valve.
9. Reinstall vent elbow onto inducer assembly outlet using three screws previously removed.
10. Reinstall vent connector and any other venting material that may have been removed during disassembly.
11. Reconnect wires to draft safeguard switch at vent elbow.
12. Plug inducer motor wires into wire harness.
13. Reconnect pressure hose to inducer assembly choke plate.
14. Turn electrical supply "ON".
15. Turn gas supply "ON" at gas control and at external shut-off.

Step 3 — System Check-Out

1. Set thermostat to "OFF". Initiate component test through circuit board by referring to "Component Test" on status code label on blower access door for complete test sequence information.
2. If any faults are flashed, refer to fault code label on unit blower door.
3. Set thermostat to initiate a call for heat.
4. Allow unit to initiate a complete call for heat cycle.
5. Check for air leakage around inducer motor assembly.

NOTE: A severely corroded inducer wheel may have been caused by one or more of the following conditions. As part of the system check-out, verify that the following conditions are not affecting the operation of the furnace:

- **Short Cycling:** Defective thermostat, Incorrect thermostat anticipator setting, dirty filter or over-sized furnace.
- **Under firing/low BTU input:** Set manifold pressure and verify firing rate as shown on rating plate by clocking the gas meter.
- **Low temperature rise:** Set unit for correct temperature rise range as shown on unit rating plate.
- **Contaminated combustion air:** Remove contaminants or provide ample fresh air for combustion.
- **Excessive amounts of outside ventilation air:** Return air temperature cannot be below 60° F (16° C) for extended periods of time.
- **Incorrect venting:** Verify proper venting per latest edition of the National Fuel Gas Code and local codes. Type B vent connector may be required for application.

For additional information, and a complete sequence of furnace operation, refer to furnace Installation, Start-Up and Operating Instructions.

6. After System Check-out is complete, set thermostat below room temperature.
7. Verify that burner shuts down and blower runs for the selected off delay time.
8. Verify furnace operates properly and set thermostat to desired room temperature.
9. Re-install outer door.

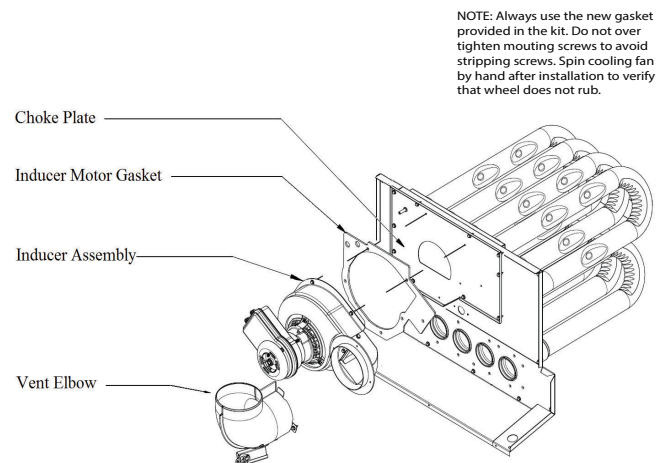


Fig. 1 – Installing New Inducer Motor

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