

349336-760, 349336-761, 349336-762, 349336-763, 349336-764, 349336-765

Inducer Motor Replacement Kit for use with Non-Condensing Furnaces

Installation Instructions

SAFETY CONSIDERATIONS

Installing and servicing heating equipment can be hazardous due to gas and electrical components. Only trained personnel should install or service heating equipment.

Untrained personnel can perform basic maintenance functions such as cleaning coils, or cleaning and replacing filters. All other operations should be performed by trained service personnel. When working on heating equipment, observe precautions in the literature, on tags, and on labels attached to the unit. Recognize safety information.

This is the safety-alert symbol. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies a hazard 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.

Follow all safety codes. Wear safety glasses and work gloves. Have a fire extinguisher available.



WARNING

PERSONAL SAFETY AND PROPERTY DAMAGE HAZARD

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

Improper installation, adjustment, alteration, service, maintenance, or use can cause carbon monoxide poisoning, explosion, fire, electrical shock, or other conditions which could result in personal injury or death. Consult your distributor or branch for information or assistance. The qualified installer or agency must use only factory-authorized kits or accessories when servicing this product.

INTRODUCTION

This instruction covers the inducer motor assembly installation on non-condensing, 33.3-inch (846 mm) high, mid-efficiency hot surface igniter units. The inducer should be replaced when the motor is seized or when the windings are open, shorted or grounded. The motor is equipped with an internal thermal overload. If the overload is open, allow time (several minutes) for overload to reset. There are currently 6 different inducer assemblies to service all single-stage, two-stage, and variable-speed furnaces. Each motor has a different horsepower and/or RPM range required for the various size furnaces.

The motor supplied in the kit is a two-speed inducer motor. Single stage operation is achieved through the use of an adapter harness included with the kit. Refer to [Table 1](#) or [Table 2](#) below for the correct furnace and kit combination.

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, single-stage adapter harness, inducer motor mounting gasket, and screws.

Table 1 – Single-Stage Inducer Kit Usage BTUh Input

Kit Number	45,000	70,000	90,000	110,000	135,000	155,000
349336-760	X	X	-	-	-	-
349336-761	X	X	-	-	-	-
349336-762	-	-	X	-	-	-
349336-763	-	-	-	X	X	X
349336-764	-	-	-	X	X	X
349336-765	-	-	-	X	X	X

Table 2 – Two-Stage and VS Inducer Kit usage BTUh Input

Kit Number	45,000	70,000	90,000	110,000	135,000	155,000
349336-760	X	-	-	-	-	-
349336-761	-	X	-	-	-	-
349336-762	-	-	X	-	-	-
349336-763	-	-	-	X	-	-
349336-764	-	-	-	-	X	-
349336-765	-	-	-	-	-	X

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.
2. Turn off gas at external shut-off.
3. Remove exterior door by loosening thumbscrew and pulling door forward.
4. Turn 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. Using the incorrect inducer motor assembly could result in no pressure switch operation, poor ignition, poor combustion, erratic burner operation/burner pulsations, flame roll-out or noise.

5. Disconnect pressure switch tube from Inducer Housing/Collector Box.
6. Remove pressure switch mounting bracket from furnace casing and move switch aside.
7. Unplug inducer motor wires from wiring harness.

NOTE: Verify the orientation of the motor wiring harness and inducer cooling shield before removing inducer motor assembly. New inducer motor assembly must be installed in same orientation for proper furnace operation.

8. Remove three screws securing inducer motor assembly (motor, wheel, and mount) to inducer housing and pull inducer motor assembly away from mounting flange. Note where inducer motor ground lead is connected.

9. Remove any gasket residue from inducer mounting flange on inducer housing/collector box.
10. Inspect / remove any loose rust or scale from inside collector box.
11. Clean pressure switch tube port on collector box with a wire or small drill bit. If water is present in tube, remove tube from pressure switch 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 mounting flange on inducer motor assembly/collector box.

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

2. Place new inducer motor gasket (provided in kit) around flange on collector box. Use a small piece of tape or a small amount of RTV silicone 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 collector box. Verify inducer motor ground wire is reinstalled in original location and the inducer cooling fan shield on the inducer motor assembly is oriented as shown in Fig. 1.
4. Spin black plastic cooling fan on inducer motor to be certain there is no interference inside of inducer housing. If interference occurs, wheel must be readjusted.
5. Re-install pressure switch tube on port located on Inducer Housing/Collector Box.
6. Re-install pressure switch mounting bracket to furnace casing.
7. Connect inducer motor leads to inducer motor, see Fig. 2.
 - a. On two-stage and variable-speed furnaces, connect furnace wiring harness directly to harness on inducer motor.
 - b. On single-speed furnaces, attach adapter harness included in kit to harness on inducer motor. Connect white lead from furnace harness to white lead on adapter harness to black lead on adapter harness.
8. Turn electrical supply “On.”
9. Turn gas supply “On” at gas control and at external shut-off.

NOTE: Blower will run for 90 sec if thermostat is calling for heat when 120V power is restored. Fault code 12 or 1+2 will flash after 90 sec. To clear the fault code, turn off power, turn thermostat off or down below room setting. Turn power back on. Set thermostat to desired temp.

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 at collector box.

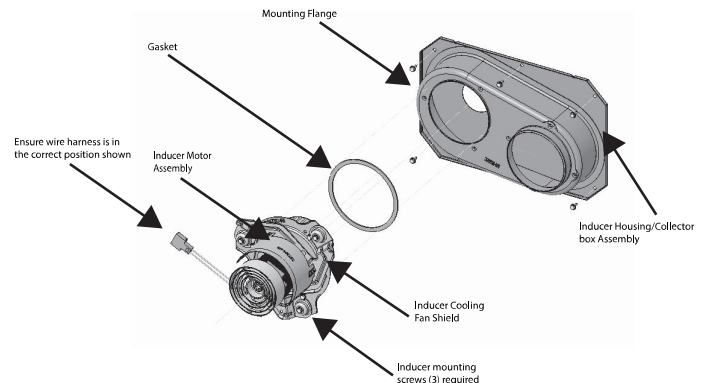
NOTE: A severely corroded inducer wheel may have been caused by one or more of the following conditions. As part of the system check-out, verify that the following conditions are not affecting the operation of the furnace:

- 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 local code. Type B vent connector is required for two-stage units and may be required for other applications.

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

6. After System Check-out, 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.

NOTE: Always use the new gasket provided in the kit. Do not over tighten mounting screws to avoid stripping screws. Spin cooling fan by hand after installation to verify that the wheel does not rub.



NOTE: Blower will run for 90 sec if thermostat is calling for heat when 120-V power is restored. Fault code 12 or 1 + 2 will flash after 90 sec. To clear the fault code, turn off power, turn thermostat off or down below room setting. Turn power back on. Set thermostat to desired temperature.

Fig. 1 – Installing the New Inducer Motor

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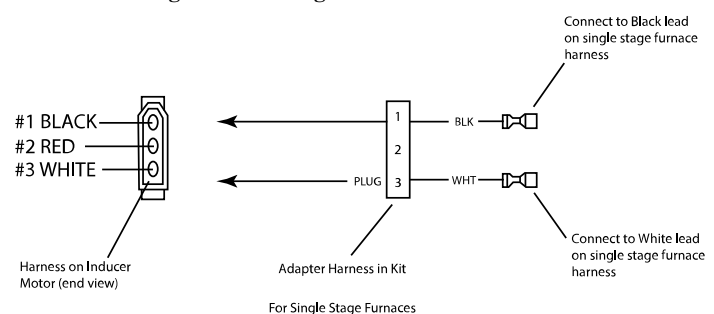


Fig. 2 – Installing Single-Stage Adapter Harness

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