

# INSTALLATION INSTRUCTIONS

## 3500-5821/A A/C BLOWER CONTROL PACKAGE for 2-Wire Thermostat System

### IMPORTANT NOTICE

These instructions are intended for the use of qualified individuals specially trained and experienced in installation of this type of equipment and related system components.

Installation and service personnel are required by some states to be licensed.

**Persons not qualified shall not install this equipment or interpret these instructions.**

### WARNING

**IMPROPER INSTALLATION MAY DAMAGE EQUIPMENT, CAN CREATE A SHOCK HAZARD, AND WILL VOID THE WARRANTY.**

### SHOCK HAZARD

**BE SURE TO TURN THE ELECTRIC POWER "OFF" AT THE MAIN ELECTRICAL SERVICE ENTRANCE BOX TO PREVENT THE POSSIBILITY OF PERSONAL INJURY OR DAMAGE TO THE EQUIPMENT**

**THE USE OF OTHER COMPONENTS NOT TESTED IN COMBINATION WITH THESE UNITS MAY MAKE THE EQUIPMENT IN VIOLATION OF STATE CODES, MAY CREATE A HAZARD AND MAY RUIN THE EQUIPMENT. IN ADDITION, THE NATIONAL MOBILE HOME CONSTRUCTION AND SAFETY STANDARDS ACT AND ITS REGULATIONS REQUIRE THE USE OF COMPONENTS TESTED OR CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY IN ALL MANUFACTURED HOMES CONSTRUCTED OR SOLD SUBJECT TO THAT ACT**

**CAREFULLY FOLLOW ALL INSTRUCTIONS AND WARNINGS IN THIS BOOKLET TO AVOID DAMAGE TO THE EQUIPMENT, PERSONAL INJURY, OR FIRE.**

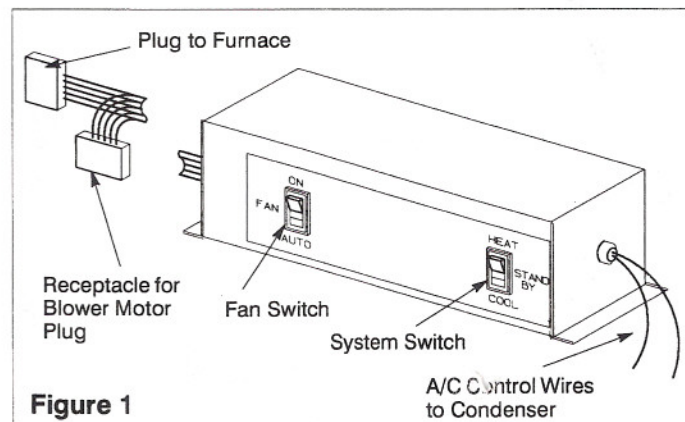
### NOTE

The words "Shall" or "Must" indicate a requirement which is essential to satisfactory and safe product performance.

The words "Should" or "May" indicate a recommendation or advice which is not essential and not required but which may be useful or helpful.

### IMPORTANT

Packed with this A/C control center is a water trap that **must** be installed in the A/C coil condensate drain hose because of negative pressure. If not installed, the coil drain pan can overflow and water will run into the furnace.



### APPLICATION

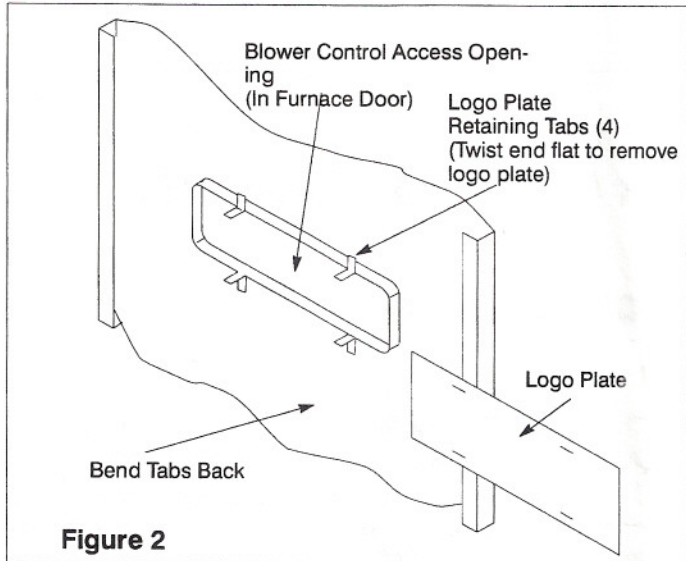
This blower control center is designed to be installed on the 3500 and EB Series electric furnaces when A/C is desired, and the home owner does not want the expense of running additional thermostat wires or changing out the heating thermostat for an air conditioning thermostat. This installation is not desirable for applications where access to the unit is through a closet door outside of the home. This control center contains the HEAT/COOL switch and the fan AUTO/ON switch, normally found on an A/C thermostat.

### NOTE

The air condition components listed on the A/C sticker were listed in combination by Underwriter's Laboratories, Inc.

### PROCEDURE

1. Remove logo plate from furnace door. See Figure 2.



**Figure 2**

2. **3500 Series** — Insure furnace disconnect has been pulled.
- EB Series** — Insure circuit breakers are switched to "OFF" position.

## NOTE

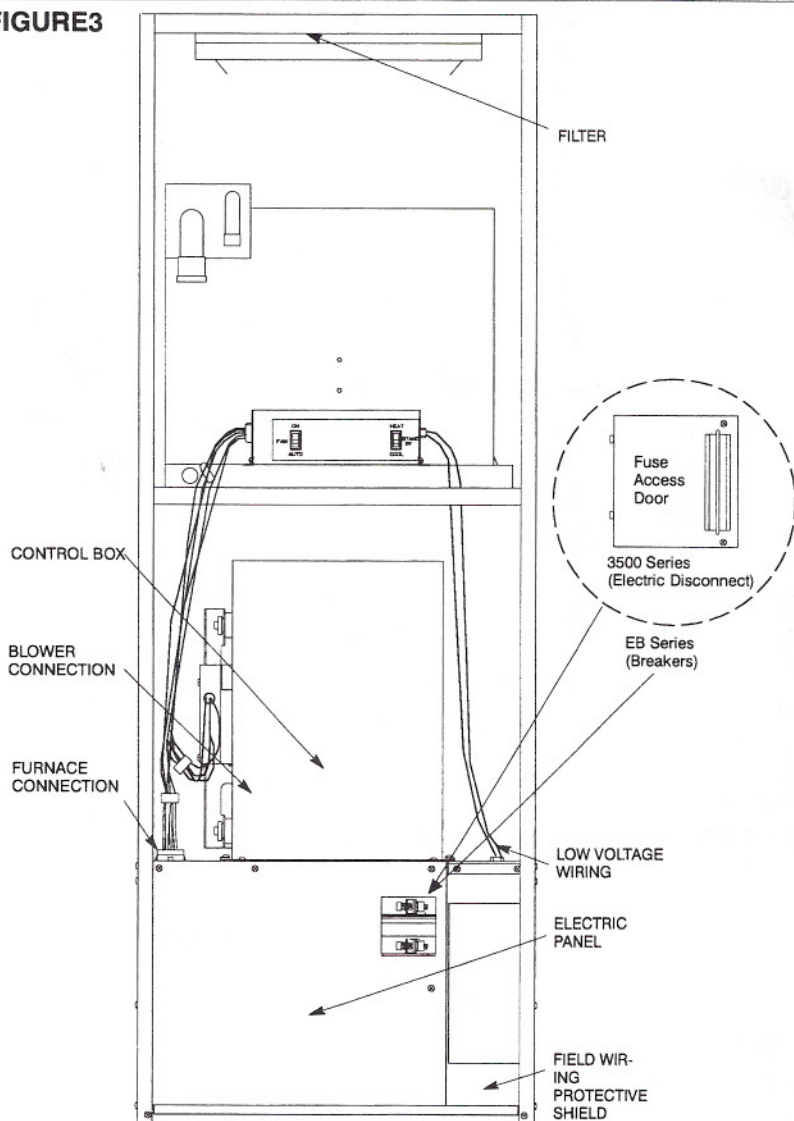
Insure that the correct blower is installed. If the blower needs to be changed, it should be done at this time.

Refer to blower installation instructions.

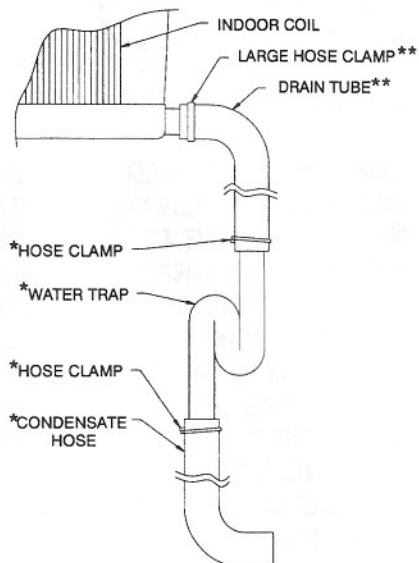
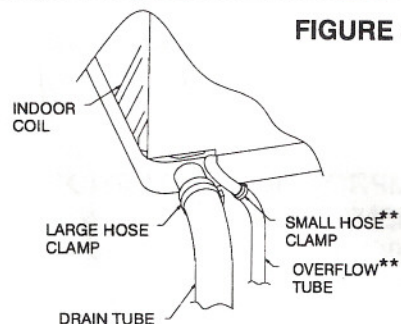
The evaporator coil and coil support **must** be installed before installing this control center. See installation instructions packed with those products for directions. **Do not connect refrigerant lines onto the coil before installing this control center.**

3. Mount the Control Center on the Coil Support Shelf as shown in Figure 4.
4. Route electrical wiring through larger hole in coil support.
5. Connect the plug from the control center into the receptacle at the top of the furnace wiring box. See Figure 4. When properly oriented, the plug will easily slide into the receptacle. **DO NOT FORCE.**

**FIGURE 3**



**FIGURE 4**



\* PACKED WITH CONTROL BOX.

\*\* PACKED WITH A-COIL

**FIGURE 5**

6. Insert the blower motor plug into the control center receptacle. See Figures 4 & 5. **DO NOT FORCE**.

### NOTE

The fan switch, located at the top of the furnace electric box (not on all models) **must be set to "AUTO"** position to enable the control center fan switch to function correctly. See Figures 1 & 4.

7. The thermostat wires need not be disturbed.
8. Attach the two (2) Air Conditioning control wires to condensing unit contactor as indicated on the wiring diagrams. These wires — one (1) **YELLOW** and one (1) **BLACK** — are located at the right side of the A/C Control Box. See Figure 1.

9. Complete installation of the A/C coil per the instructions packed with the coil and condensing units.

10. **3500 Series** — Replace furnace disconnect.  
**EB Series** — Switch circuit breakers to "ON" position.

11. Replace furnace door.

12. Switch power on.

13. Check operation. See Operation Check.

### NOTE

Wiring diagram for air conditioning application is located inside the furnace Control Box cover.

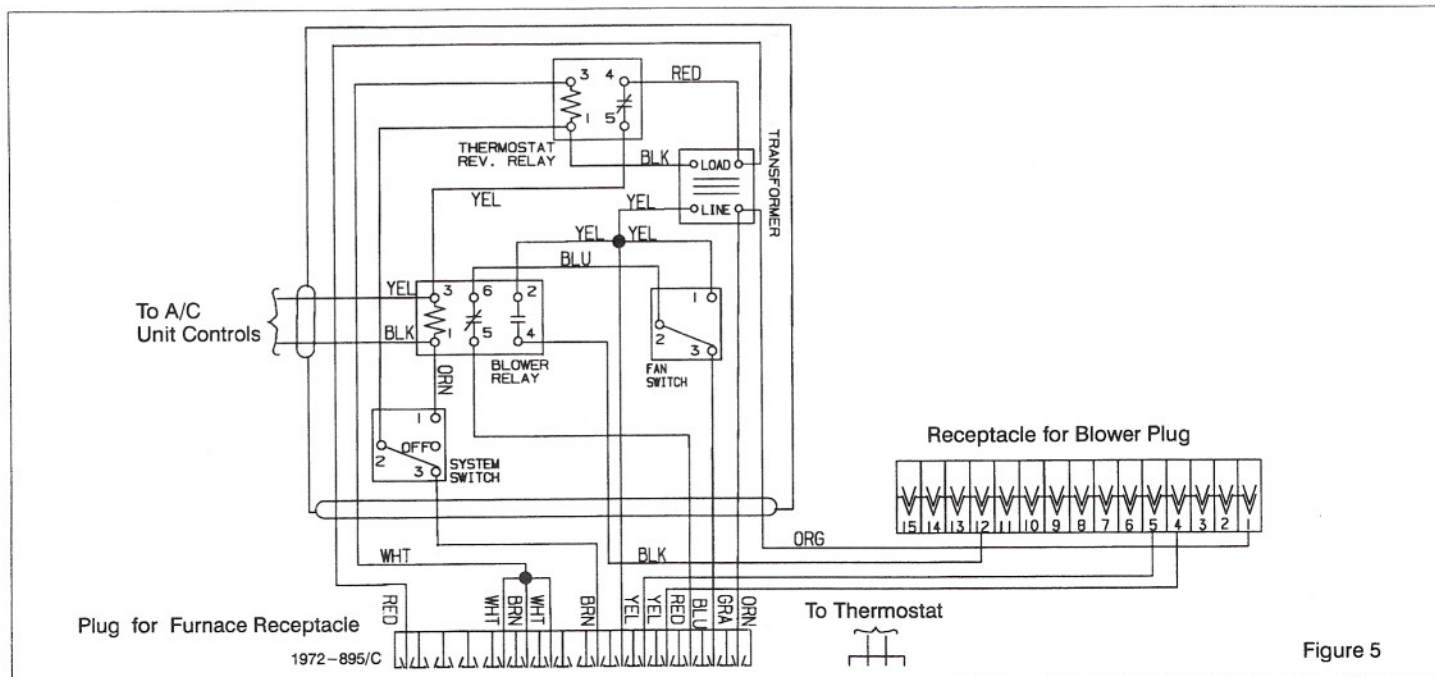


Figure 5

### OPERATION CHECK

1. Set control center FAN switch to "**ON**" and SYSTEM switch to "**HEAT**".
  - a. Heating elements cycle on and off, on demand from thermostat, after a few seconds for components to react.
  - b. Blower operates continuously on high speed only.
2. Set control center Fan switch to "**AUTO**" and System switch to "**HEAT**".
  - a. Heating elements cycle on and off, on demand from thermostat, after a few seconds for components to react.
  - b. Blower operates on heating speed when first heating element is energized. When thermostat is de-energized, blower shuts off as first heating element shuts off.
3. Set control center Fan switch to "**ON**" and System switch to "**COOL**".
  - a. Blower runs at high speed continuously.
  - b. Condensing Unit cycles on and off with demand from thermostat.
4. Set control center Fan switch to "**AUTO**" and System Switch to "**COOL**".
  - a. Blower operates on air conditioning speed and with demand from thermostat, cycles on and off with condensing unit.
5. Set control center Fan switch to "**AUTO**" and System Switch to "**STAND BY**" (off).
  - a. No Heating or Air Condition or Blower, regardless of thermostat temperature setting.
6. Set control center Fan switch to "**ON**" and System Switch to "**STAND BY**" (off).
  - a. No Heating or Air Condition and Blower operates on A/C, regardless of thermostat temperature setting.

# INSTALLATION INSTRUCTIONS

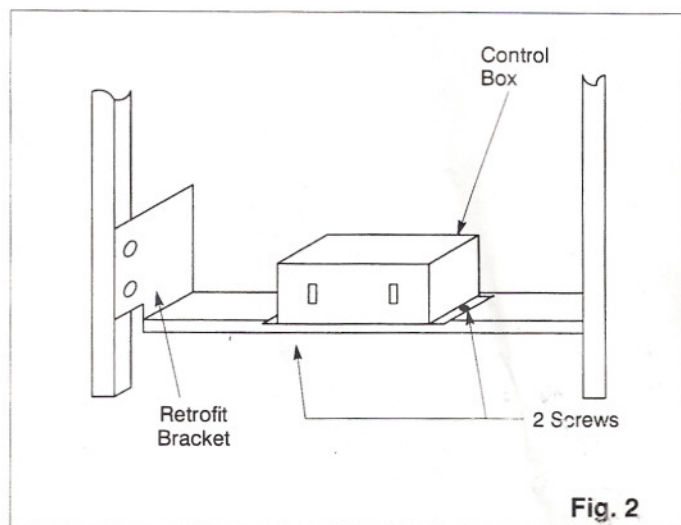
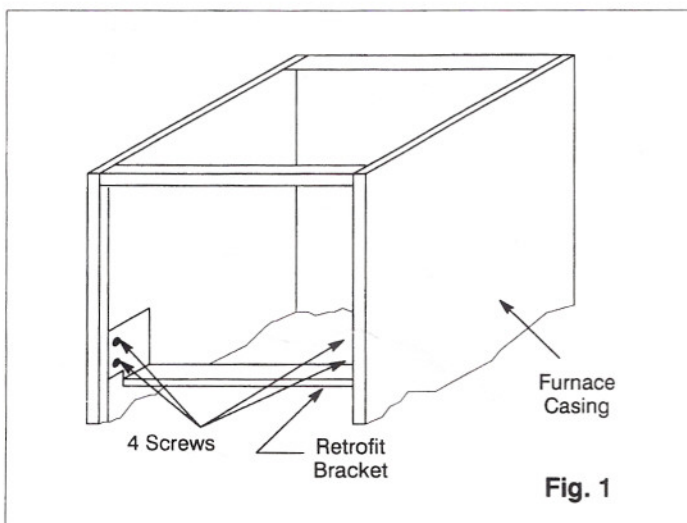
## 3500-7831 RETROFIT BRACKET

### APPLICATION:

These instructions are for use when a 3500-5821 2 wire A/C control box is installed in a 3400 Series furnace. The retrofit bracket, and these instructions are **not** to be used when this control box is installed on a 3500 Series furnace.

### INSTALLATION:

1. After the "A" coil has been installed in the furnace, locate retrofit bracket as shown in Fig. 1. Attach to furnace front flanges with the four (4) screws provided.
2. Position 3500-5821 2 wire A/C control box on retrofit bracket as shown in Fig. 2. Attach with two (2) screws provided.
3. Make wiring connections per control box installation instructions.



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