

ACCESSORY KIT INSTALLATION INSTRUCTIONS

3500-7901/A 5 TON BLOWER ASSEMBLY

GENERAL INFORMATION

List of components provided with this kit:

- Blower Assembly
- Coil Shelf
- Casing Insulation
- Hose Clamps
- Condensate Trap
- Harness Assembly for EBH Furnace
- Drain Tube
- Insulation Tabs (x3)
- Screws (x18)
- Wire Tie
- Coil Shelf Panels (x2) Insulated
- Upflow Baffle

IMPORTANT - These instructions are intended for the use of qualified service technician 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 or service may damage equipment, can create a hazard and will void the warranty.

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 the act.

Carefully follow all instructions and warnings in this booklet to avoid damage to this 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.

APPLICATION

This blower assembly is designed for use on the EB series manufactured home electric furnaces to accommodate other components used with the furnace when a change in C.F.M. is needed that cannot be achieved with the original furnace blower. Such as when a 4 ton heat pump or a 5 ton A/C condenser is added to the furnace.

Some modifications have been made to EB electric furnaces to accept A-Coils with this blower. All EB series furnaces manufactured after August 1998 already have these changes implemented. If this blower is being installed with an older EB series furnace, then refer to "Modification Required to Add A/C to Older EB Furnaces" in these instructions, when adding air conditioning to the furnace.

If this blower is being used with an EBH (heating only) furnace, refer to "Changes for EBH Furnaces" in these instructions.

If this blower is being used in an upflow mode, then refer to "Changes For Upflow Application" on Page 5.

NOTE: Refer to air conditioning / heat pump equipment sticker on the furnace or refer to Table 2 for correct blower speed. The correct speed wire will have to be connected inside the control box on the blower relay. Refer to Tables 1 & 2 for correct blower speed and wire color. A closet or alcove must have total free area opening of at least 330 sq. in. for return air.

REMOVAL OF ORIGINAL FURNACE BLOWER

WARNING

SHOCK HAZARD - Be sure the electric power is "OFF" and locked out at the main electrical service entrance box to prevent the possibility of personal injury or damage to the equipment.

1. Remove furnace door.
2. Turn the circuit breaker(s) off.
3. Remove the control box cover by removing four screws. See Figure 1. Discount two insulated spade terminals (cooling and heating speeds) from blower relay inside the control box (terminals 4 & 6). See Figure 2.
4. Remove the five blower mounting screws and slide the blower halfway out of the front of the furnace. See Figure 4.

5. Remove wire clamp screw and remove wire clamp. See Figure 3. Take the strain relief out. See Figure 1. Disconnect the orange common wire flag terminal from the capacitor. See Figure 2.
6. Slide the blower out of the furnace.

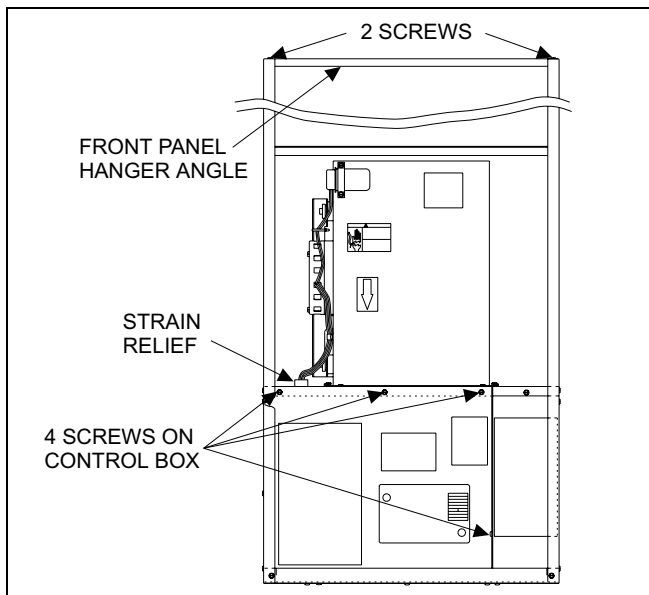


FIGURE 1

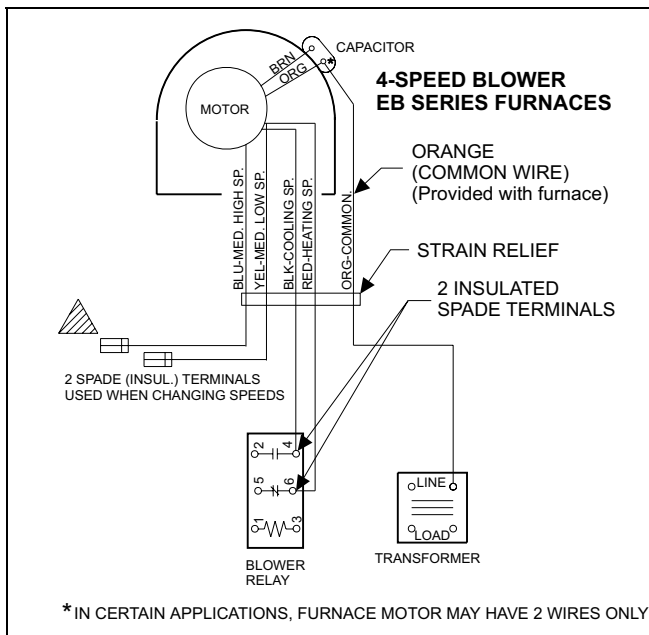


FIGURE 2

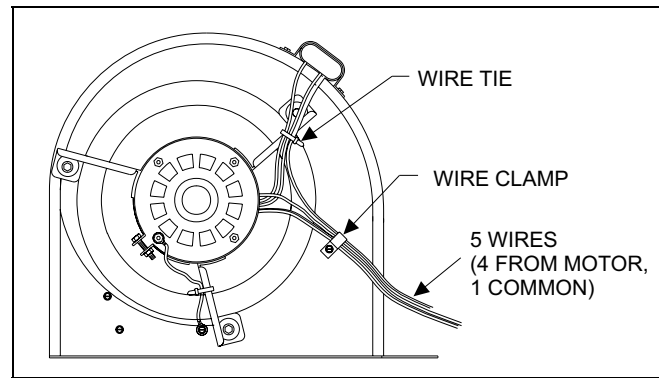


FIGURE 3

ADDING COIL SHELF, INSULATION AND CONDENSATE TRAP

1. Install insulation tabs to casing sides and back with screws provided. Screw holes for tabs are prepunched below the two sets of holes for coil support. See Figure 4.
2. Spray adhesive (3M Super 77) to the casing insulation (if needed). Casing insulation is provided with this kit. Then secure insulation in furnace casing with coated side visible. Tuck insulation inside casing front edges. Push insulation tabs through the insulation. Be sure to fold tabs back over to secure insulation to casing sides and back. See Figure 4.

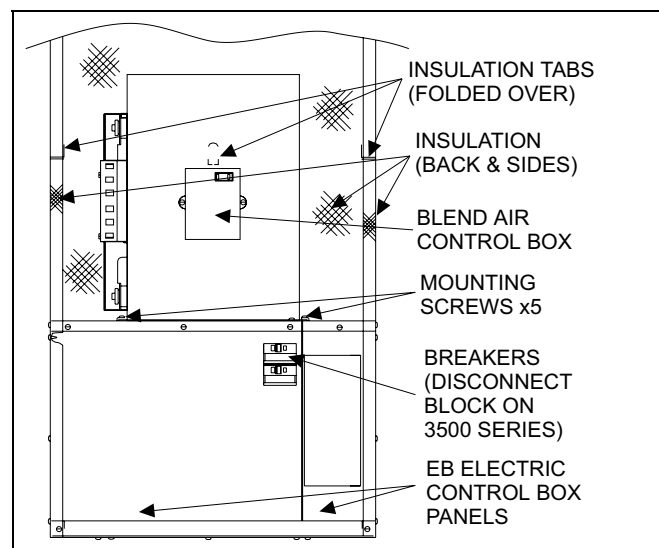


FIGURE 4

INSTALLATION OF COIL SUPPORT

Place coil support in casing with coil support flanges up. Be sure to note that there are two sets of pre-punched holes in casing sides (use the upper holes). Secure coil support to casing sides with screws provided. See Figure 6.

If our “Standard” or “Deluxe” Blend Air Control box is mounted on the blower, follow the blend air instructions below:

Furnaces manufactured before July 2000 - thermostat wire hole on the side of the casing may have to be moved back to clear the coil shelf panels.

BLEND AIR INSTRUCTIONS

If our “Standard” or “Deluxe” Blend Air systems are installed on this furnace then you should have a Blend Air Control Box mounted on the furnace blower. See Figure 4.

Disconnect the thermostat wires, remove the control box from the blower and install it on the right coil shelf panel using the same screws. Pierce a small hole through the bushing in the insulation of the coil shelf panel to route the thermostat wires. See Figure 5. Reconnect the wiring of thermostat wires in the blower compartment. Proceed with the coil shelf panel installation.

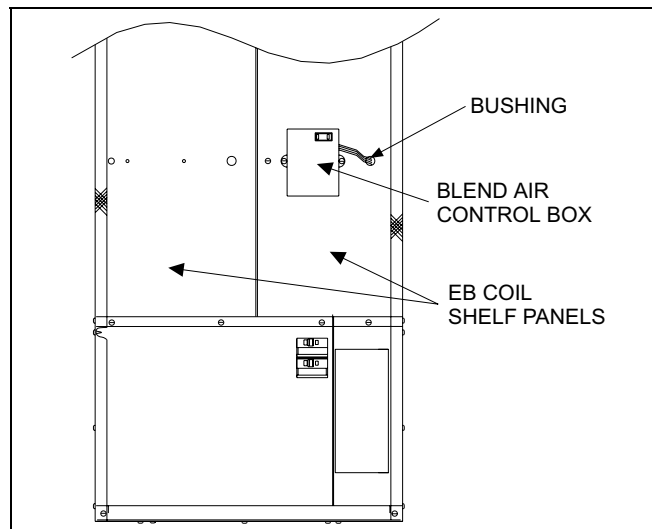


FIGURE 5

COIL SHELF PANEL INSTALLATION

Loosen the screws on the two EB electric control box panels in the furnace. See Figure 4. Place the slotted ends of the two coil shelf panels (provided) on the loosened screws behind the control box panels. See Figure 4. Line up the holes in the coil shelf panels with the holes in the coil shelf and secure with the screws provided. See Figure 4, 5 & 6. Make sure that the insulated sides of the panels are towards the blower compartment.

The A/C evaporator coil or indoor heat pump coil can now be installed according to the instructions packed with the coil. Refer to Table 2 for more information.

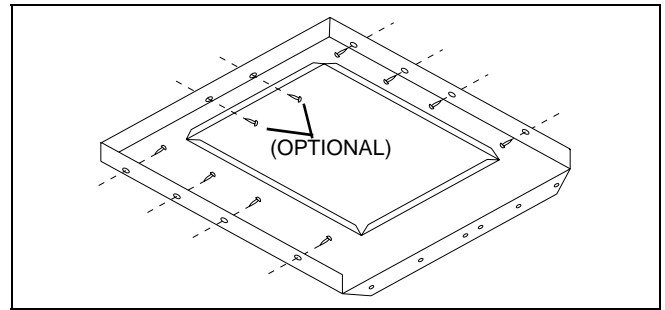


FIGURE 6

In order to install A-Coil, the front panel hanger angle will have to be removed by removing two screws. (See Figure 1). Also refer to Installation Instructions of the furnace. Replace the angle after installing the A-Coil.

BLOWER INSTALLATION

1. Start the blower's side flanges into the blower tracks and slide blower halfway into the furnace.
2. Install the orange common wire to the capacitor. See Figure 2. Install the heating speed wire to terminal #6 on the blower relay and the cooling speed wire to terminal #4 on the blower relay. See Figure 2. Refer to Table 1 and 2 for correct heating and cooling speed, and wire colors. All four speed wires on the blower motor have a pre-insulated dummy terminal. Remove the dummy terminal only off the two terminals that you will be using. See Tables 1 & 2.
3. Reinstall wire clamp, wire tie and strain relief in the furnace. See Figures 1 & 3.
4. Slide the blower all the way back in the furnace until the blower mounting screw holes line up with those in the furnace.
5. Reinstall the five blower mounting screws to secure the blower to the furnace. See Figure 4.
6. For blend air installation, if applicable, follow furnace instructions and blend air instructions.

NOTE: Wires must be reconnected to relay and capacitor as shown on supplied unit's wire diagram. Failure to do so can create a hazard and void the warranty.

Table 1: EB Series (Blower Speeds & Wire Colors)

MODEL NUMBER	High*	Med. High	Med. Low	Low
	Black	Blue	Yellow	Red
EB10B	Cooling			Heating
EB12B	Cooling			Heating
EB15B	Cooling			Heating
EB17B	Cooling		Heating	
EB20B	Cooling		Heating	
EB23B	Cooling		Heating	

Table 2: EB Series (U.S. Installations Only)

Only the following heat pump coils and outdoor units may be installed with this furnace.

Outdoor Unit No.	Indoor Unit No.	Blower Part No.	Blower Cooling Speed
*RH*018*	M**18**	Production Blower	Med. High
*RH*024*	M**24**		
*RH*030*	M**30**	Production Blower	High
*RH*036*	M**36**		
*RH*042*	M**42**		
*RH*048*	M**48**	3500-7901/*	

Only the following air conditioner evaporator coils and condenser units may be installed with this furnace.

Condensing Unit	Evaporator Unit	Blower Part No.	Blower Cooling Speed
*RC*018*	M**18**	Production Blower	Med. High
*RC*024*	M**24**		
*RC*030*	M**30**		
*RC*036*	M**36**		
*RC*042*	M**42**	Production Blower	High
*RC*048*	M**48**		
*RC*055*	M**55**		
DRC*018*	MDC30M	Production Blower	Med. High
DRC*024*			
DRC*030*			
DRC*036*	MDC48D	Production Blower	Med. High
DRC*042*	MDC48D	Production Blower	High
DRC*048*			

This furnace is U.L. listed for use with U.L. listed 7681-8171/* Blend Air Environmental system.

This furnace is also listed with 7681-8191/* or 7681-8391/* or 7681-8091/*

* Letter may vary

CONDENSATE LINE INSTALLATION

Install condensate drain pieces provided in this insulation and coil shelf package as shown in Figure 7 & 8. Refer to A-Coil installation instructions for more information regarding drain line connections.

WARNING

Failure to install water trap can result in damage to equipment and/or personal injury.

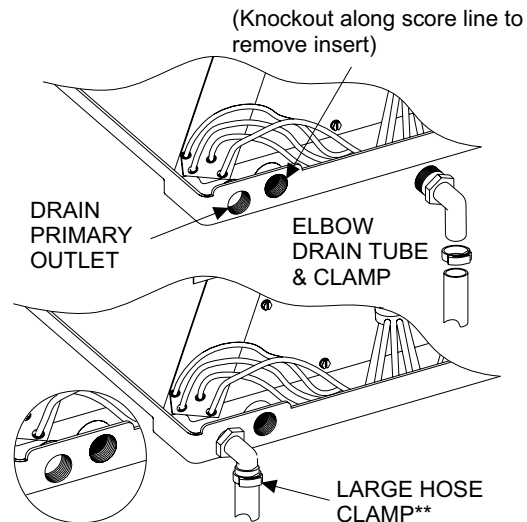


FIGURE 7

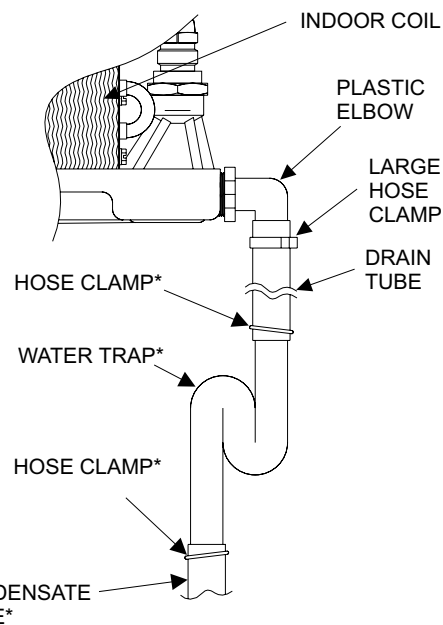


FIGURE 8

CAUTION

All areas around the line sets, drain hoses and other openings in the furnace should be sealed airtight. Use some moldable compound or caulking to seal the area. Failure to do so may result in loss of performance and premature compressor failure.

MODIFICATIONS REQUIRED TO ADD A/C TO EB FURNACES PRIOR TO AUGUST 1998 PRODUCTION (If Adding 3500-7901/* Blower)

1. Drill eight holes (.120" diameter) on the sides of the EB furnace casing 2" above the existing upper row of holes for coil shelf. See Figure 9.
2. Cut a notch 7" wide x 3/4" high on the back flange of the filter housing to facilitate A-Coil installation. See Figure 9.
3. Proceed with other instructions in this installation manual.

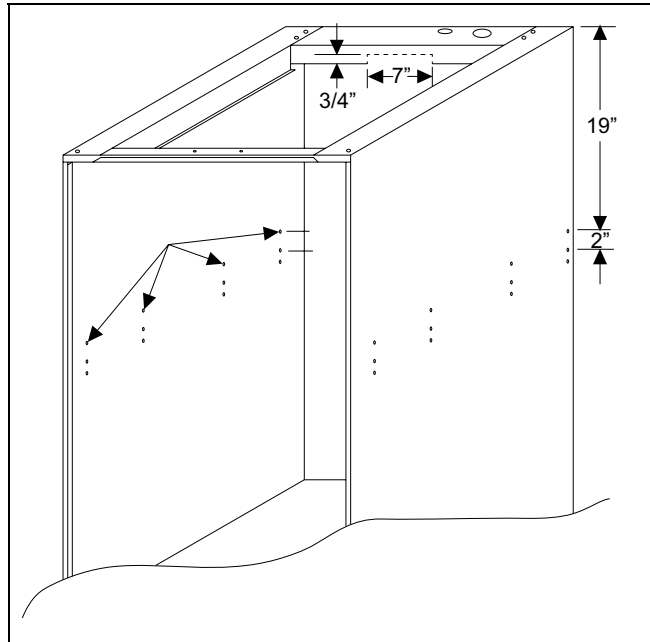


FIGURE 9

CHANGES FOR EBH FURNACES

If this blower is being used in conjunction with an EBH heating only furnace, the following changes will have to be made:

1. One of the control boxes 3500-5821/A (for 2-wire system), or 3500-5841/B (for 4-wire systems) will have to be used to convert the EBH furnace to A/C ready.
2. The harness assembly that is shipped with this blower will have to be installed on the motor to make it compatible with the EBH furnace.
3. Please connect the red, yellow, and black wires from the harness to the same color wires on the motor. The blue wire (med. high) would not be connected to any wires. If there is a need for medium high speed (blue wire) for cooling, then the black wire from the motor can be replaced with the blue wire from the motor. Connect the orange wire from the harness to the same side of capacitor as the other orange wire from the motor is connected

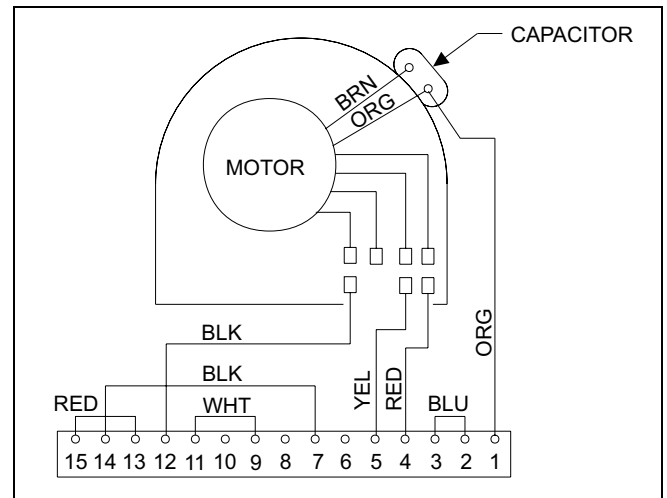


FIGURE 10

4. Once the harness has been added to the motor of this blower, then follow the instructions of the control box chosen for further installation instructions.
5. Do not connect the blower plug to the EBH furnace wiring box receptacle.
6. Refer to the other instructions in this document to select the correct speeds, and help with other installation questions.
7. If the length of some wires is longer than required, use wire ties or other means to prevent them from entering the blower housing.

CHANGES FOR UPFLOW APPLICATION

If this blower is being used in an upflow application, then the following changes will need to be made:

1. Remove original furnace blower as described in the instructions on Page 1.
2. Install upflow baffle inside the heater chute as shown in Figure 11 using two screws provided. Holes are already provided in the furnace.
3. Carry on with the installation of the blower as described in the instructions on Page 3.

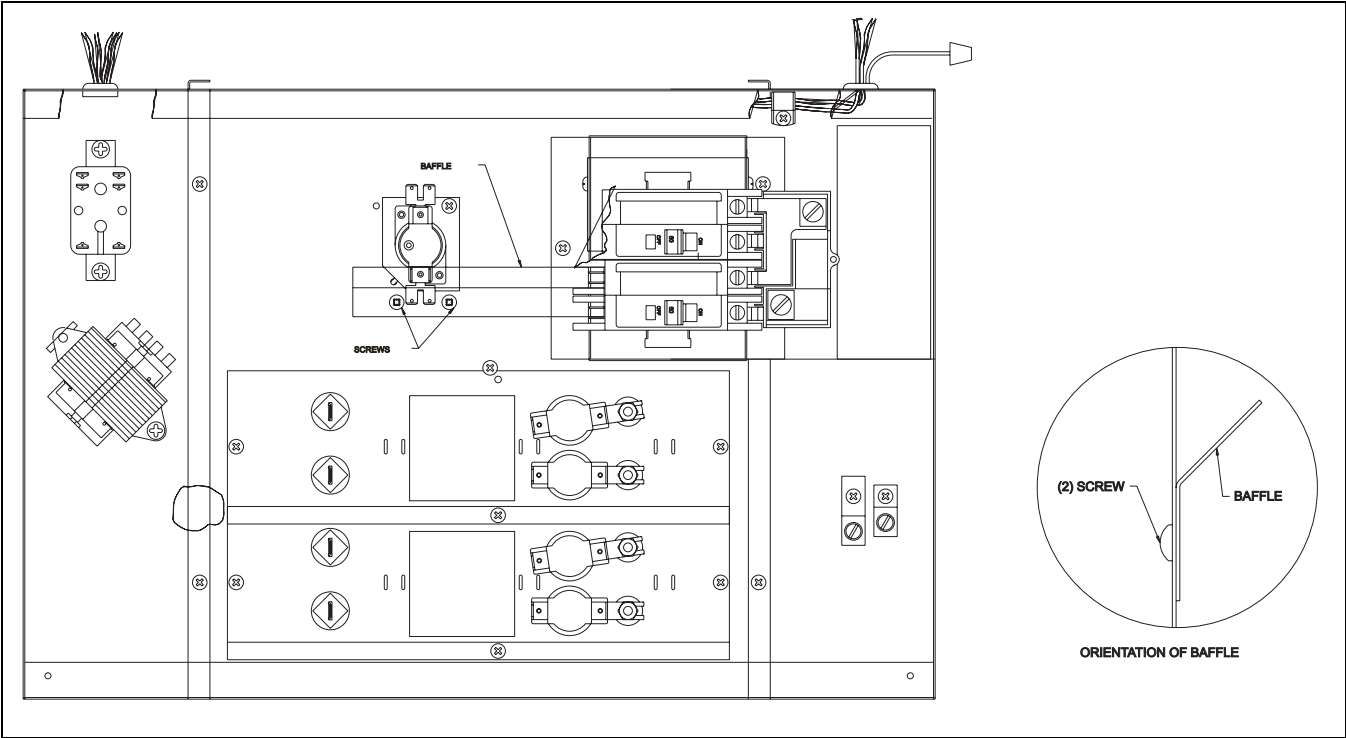


FIGURE 11

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