

INSTALLATION

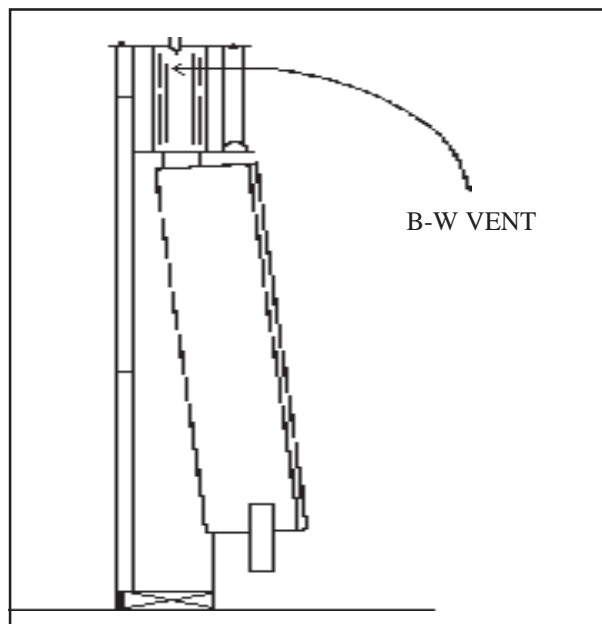


FIGURE 3

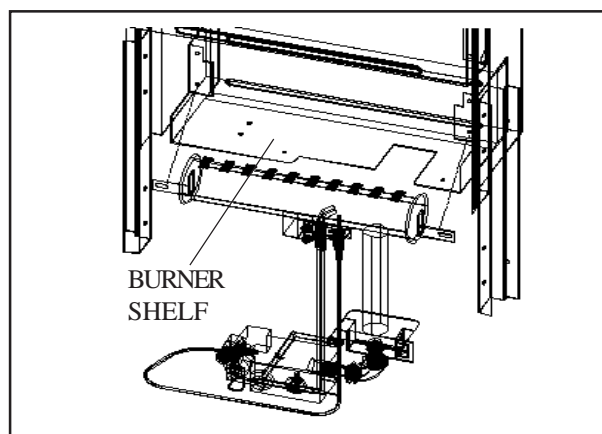


FIGURE 4

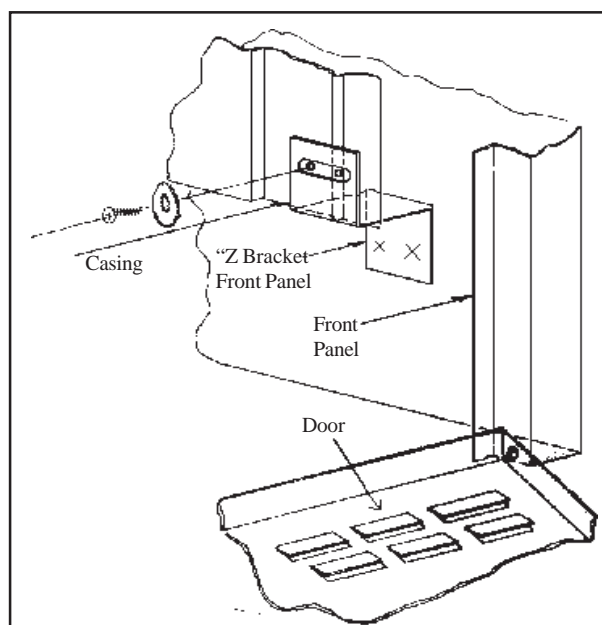


FIGURE 5C

STEP 6. To place furnace into position, grasp furnace and lift so furnace flue vent and header plate vent opening engage. Do not use burner or gas control to lift heater. Lift furnace upward and swing bottom into wall opening until legs rest on floor plate and are flush to finished wall. For proper combustion, level heater front to back and side to side. Nail legs to studs. **DO NOT BEND LEGS** as this will put the entire unit into a bind and cause expansion noises (See Figure 3).

STEP 7. A drip leg and a manual valve equipped with a 1/8 N.P.T. plugged tapping accessible for test gauge connection should be installed immediately upstream of the gas supply connection to the appliance. Some codes and ordinances require that the manual valve be located outside the appliance.

STEP 8. Make gas connection using connector the same size as gas connection of furnace. **CHECK ALL CONNECTIONS FOR GAS LEAKS WITH LEAK DETECTOR SOLUTION. DO NOT USE OPEN FLAME.**

STEP 9. For wall thermostat units, see “Wiring” section for thermostat connections. Make sure all connections are correct and connector stems are not touching.

STEP 10. To fasten front panel to furnace, be sure exposed portion of header is free of debris. Place outer panel over furnace with top of panel about one inch above header and centered in opening. Keep front panel flush to finished wall and slide down until rear flange of top outer panel is wedged tight against the front of the plaster ground channel and flush with wall. **CAUTION: Do not hang front panel behind (over front lip) the plaster ground channel as this could result in excessive noise.** Open bottom door of front panel and place sheet metal screw into locking latch. Secure top of front panel to header plate with screw provided. This will hold front panel securely to wall. See Figures 5A, 5B, (See Page 8), and 5C (Page 9).

CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

**WIRING INSTRUCTIONS –
GRAVITY WALL FURNACE**

WARNING: Failure to locate the thermostat properly or to wire the furnace correctly may result in continuous operation, control damage or failure to operate. This can cause property damage, personal injury, or loss of life.

Follow the instructions included with the thermostat. Locate the thermostat approximately five (5) feet above the floor and four feet (4') from appliance. Always mount the thermostat on an inside wall where it won't be affected by heat or cold sources such as direct sunlight, televisions, fireplaces, hidden hot or cold water pipes, drafts, etc. The thermostat must never be installed in an adjoining room where a door can be closed between the thermostat and wall furnace. This wall furnace is equipped with a self generating control system. Never connect to a 24 volt transformer or to the household electrical system. Do not use more thermostat wire than is included with the wall furnace. Do not run thermostat wire in same stud space with vent. Conceal wire inside wall or secure to wall with insulated staples that are included.

YOUR FURNACE IS SHIPPED WITH A WALL THERMOSTAT (Figure 8). YOU MAY CONVERT CONTROL TO BUILT-IN BULB CONTROL WITH THE OPTIONAL BBSK KIT. SEE PAGE 13, 14 and 15 FOR INSTALLATION INSTRUCTIONS.

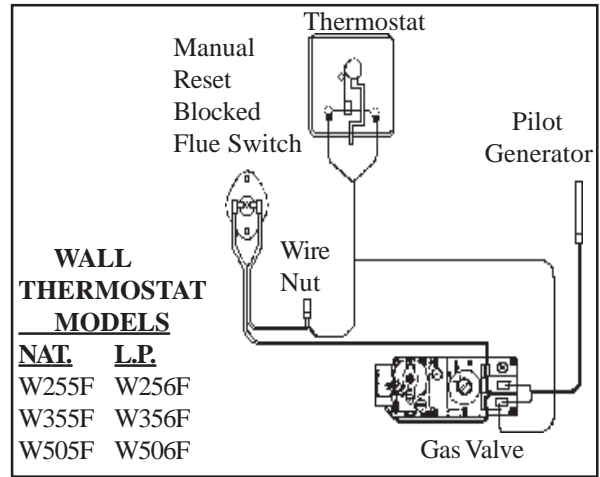


FIGURE 8

LIGHTING INSTRUCTIONS

MODELS: W255F, W256F / W355F, W356F / W505F, W506F

FOR YOUR SAFETY READ BEFORE LIGHTING

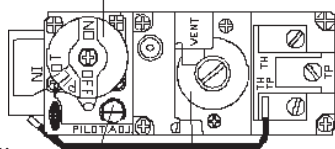
WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS:
- Do not try to light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- C. If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

LIGHTING INSTRUCTIONS

1. STOP! Read the information on the safety label.
2. Set thermostat to it's lowest setting.
3. Open cabinet door.
4. Depress and turn gas control knob clockwise ↻ to "OFF".

Gas Control Knob



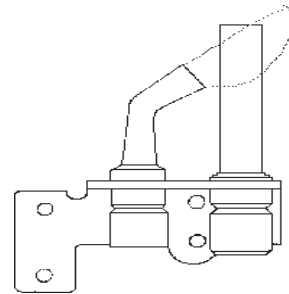
Manifold
Pressure Tap

Pilot Adjustment
Screw Cap

Internal Manifold
Pressure Regulator

NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.

5. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the information on the safety label. If you don't smell gas, go to the next step.
6. Locate the pilot. (Follow metal pilot tube from gas control).
7. Turn gas control knob counterclockwise ↶ to "PILOT".



Pilot is
located
on side
of burner

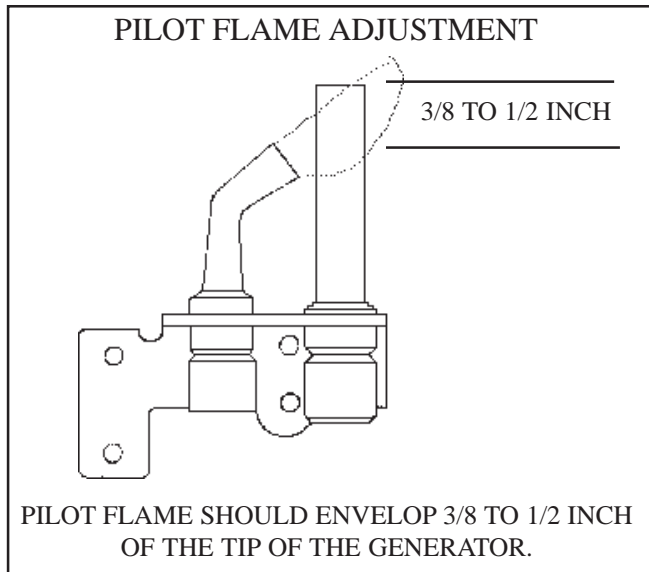
8. Push gas control knob and hold in. Immediately light the pilot with a match. Continue to hold the gas control knob in for about one (1) minute after the pilot is lit. Release gas control knob and it will pop back up. Pilot should remain lit. If pilot goes out, repeat steps 4 through 8.
- If knob does not pop up when released, STOP and immediately call your service technician or gas supplier.
- If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
9. Turn gas control knob counterclockwise ↶ to "ON".
10. Close the cabinet door.
11. Set thermostat to desired setting.

TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to it's lowest setting.
2. Open cabinet door.
3. Push in gas control knob slightly and turn clockwise ↻ to "OFF". Do not force.
4. Close cabinet door.

PILOT ADJUSTMENT

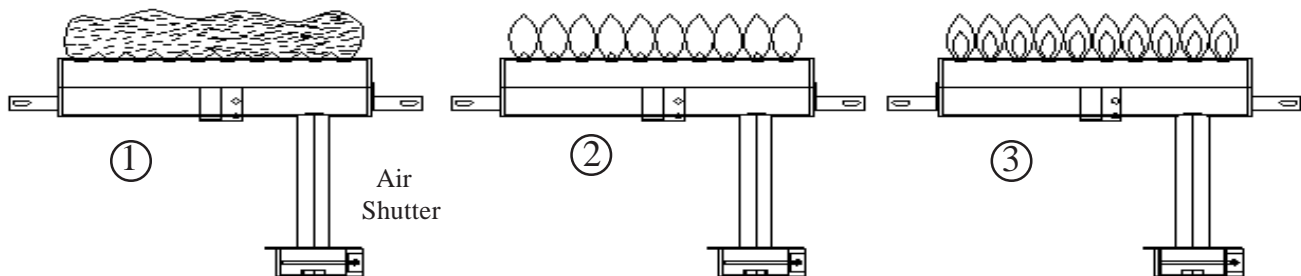
Locate the pilot adjustment screw on the valve. The pilot flame should surround at least the top 3/8" of the powerpile (pilot generator) or thermocouple (see below). The pilot is unregulated so it will be operating at inlet line pressure (Max. 7" w.c. for natural gas and 11" w.c. for propane). To decrease the pilot flame, turn the screw clockwise (approximately seven to nine full turns to bottom of pilot light channel) until you produce sufficient flame at the minimum noise level.



MAINTENANCE INSTRUCTIONS

1. Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners, pilot burners, circulating air passageways and venting systems of the appliance be kept clean.
2. If the appliance has been equipped with the optional WFF81-C fan kit assembly, the bearings of the motor should be oiled every six months with approximately 2 drops of S.A.E. 20 oil.
3. The appliance area must be kept clear and free of any combustible materials, gasoline and other flammable vapors and liquids.
4. It is essential that the flow of combustion and ventilation air not be obstructed.
5. Periodic examination of the entire ventilation system as a routine part of the safety performance check is recommended on an annual basis.

BURNER FLAME ADJUSTMENT - STAINLESS STEEL BURNER



1. **FLAME TOO SOFT** - Yellow Flame. Open air shutters until yellow tipping disappears.

2. **FLAME TOO HARD** - Deep Blue Coloration. Closing air shutters to a point where yellow tipping begins, re-open slightly to eliminate yellow tipping. Air shutter adjustment is now correct.

3. **NORMAL FLAMES**

NOTE: It is advised that the burner flames be checked at least twice during the heating season for any changes in burner characteristics. Vacuum burner compartment at start of heating season or as often as needed.

BBSK INSTALLATION INSTRUCTIONS

- STEP 1.** Select left or right side of front panel for most convenient location of the temperature control knob. Remember to choose the side that allows adequate clearance for accessibility to adjust the control knob.
- STEP 2.** On selected side, locate three (3) vertical dimples beginning approximately 20-1/2" above bottom of the front panel. See Figure 9.
***On Gravity Wall Furnaces manufactured prior to November 2005 (without bracket hole dimples in the left and right side), you may use the gravity BBSK bracket as a template to locate holes. Measure 20-1/2" up on the preferred side, to locate lowest hole.**
- STEP 3.** Using these three (3) dimples as locator, drill three 1/4" holes.
- STEP 4.** Remove the BBSK control switch from the packing set. See Figure 10.
- STEP 5.** Secure P/N 40225 switch bracket to the BBSK control switch using two (2) #6x1/4" screws provided. See Figure 10.
- STEP 6.** Place BBSK control switch inside front panel, align engagement holes with clearance holes in P/N 40230 heat shield and the 1/4" drilled holes in the front panel. Attach using two (2) #8x1/2" screws provided. Make sure heat shield is between the BBSK control switch and the heat exchanger.
- STEP 7.** Connect each end of the black wires to the two outside terminals on the BBSK control switch, route wires down the inside of the front panel. See Figure 11.
- STEP 8.** Straighten the bulb capillary tube using extreme care not to bend or damage the tube, route the tube down the inside of the front panel.
- STEP 9.** Install the front panel onto the wall furnace.
- STEP 10.** Insert the control knob onto the control rod. See Figure 10.
- STEP 11.** Open the front panel door.
- STEP 12.** Connect one black wire to the stripped end of the blue blocked flue switch wire. Connect the other black wire to the "TH/TP" terminal on the gas valve. See Figure 11. **NOTE: If you are replacing an existing wall thermostat, you must first disconnect the thermostat wires from the gas valve.**
- STEP 13.** Secure the sensing bulb to the bottom of the gas valve using the nylon clamp and blunt screw provided. See Figure 12.
- STEP 14.** Close the front panel door.
- STEP 15.** Follow the lighting instructions to place the heater in operation.

BBSK INSTALLATION INSTRUCTIONS

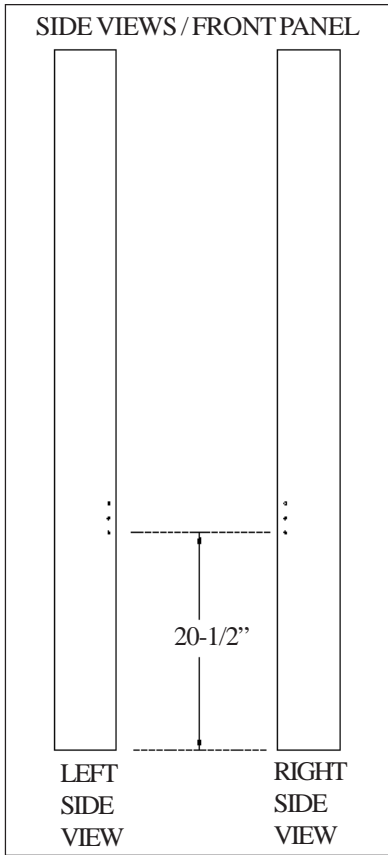


FIGURE 9

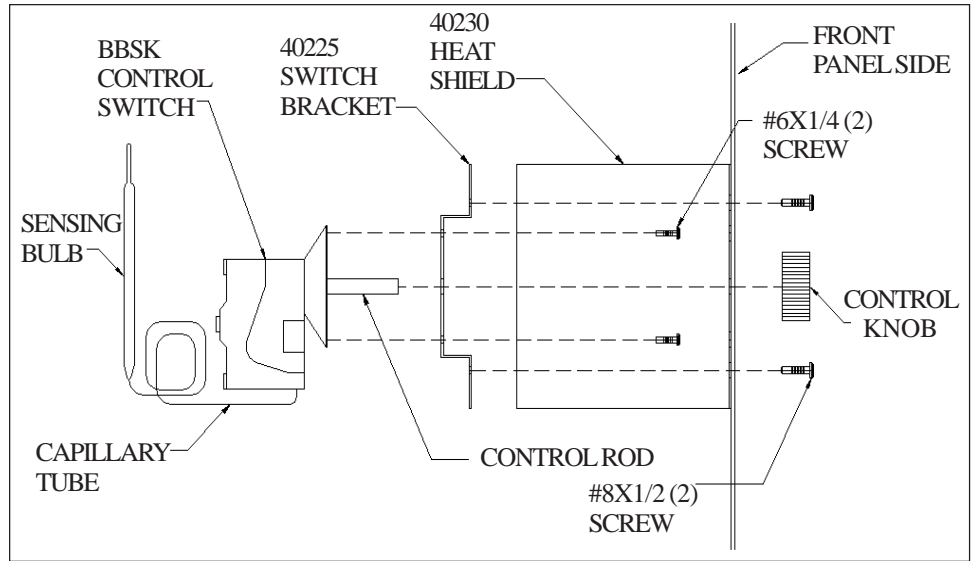


FIGURE 10

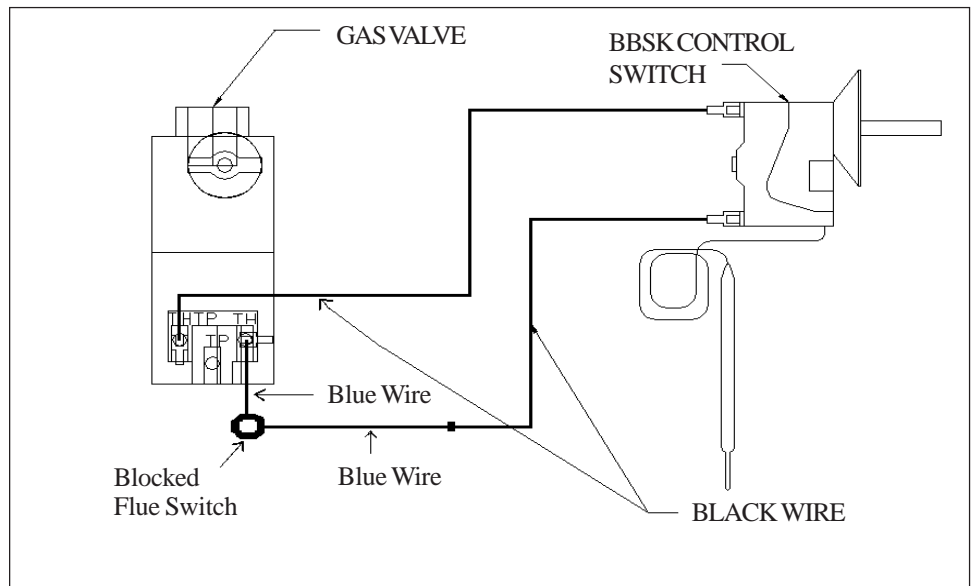


FIGURE 11

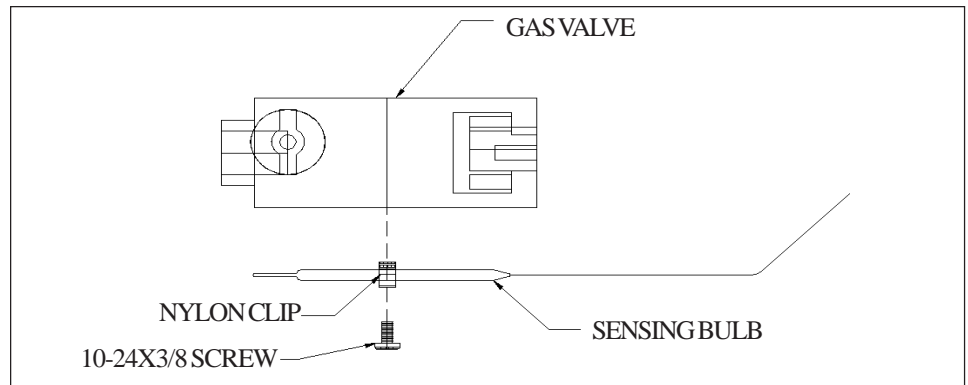


FIGURE 12

BBSK KIT LIGHTING INSTRUCTIONS

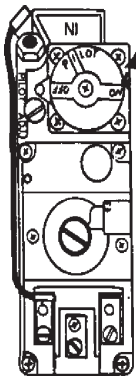
FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS:
- Do not try to light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

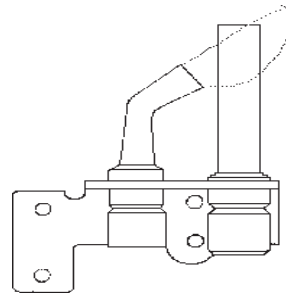
LIGHTING INSTRUCTIONS

1. STOP! Read the information on the safety label.
2. Turn temperature control knob clockwise ↻ to "LO".
3. Open cabinet door.
4. Depress and turn gas control knob clockwise ↻ to "OFF".



GAS CONTROL KNOB

NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.



Pilot is located on side of burner

5. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the information on the safety label. If you don't smell gas, go to the next step.
6. Locate the pilot. (Follow metal pilot tube from gas control).
7. Turn gas control knob counterclockwise ↻ to "PILOT".
8. Depress gas control knob and hold in. Immediately light the pilot with a match. Continue to hold the gas control knob in for about one (1) minute after the pilot is lit. Release gas control knob and it will pop back up. Pilot should remain lit. If pilot goes out, repeat steps 4 through 8.
- If knob does not pop up when released, STOP and immediately call your service technician or gas supplier.
- If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
9. Turn gas control knob counterclockwise ↻ to "ON".
10. Close the cabinet door.
11. Turn temperature control knob to desired setting.

TO TURN OFF GAS TO APPLIANCE

1. Turn temperature control knob clockwise ↻ to "LO".
2. Open cabinet door.
3. Push in gas control knob slightly and turn clockwise ↻ to "OFF". Do not force.
4. Close cabinet door.

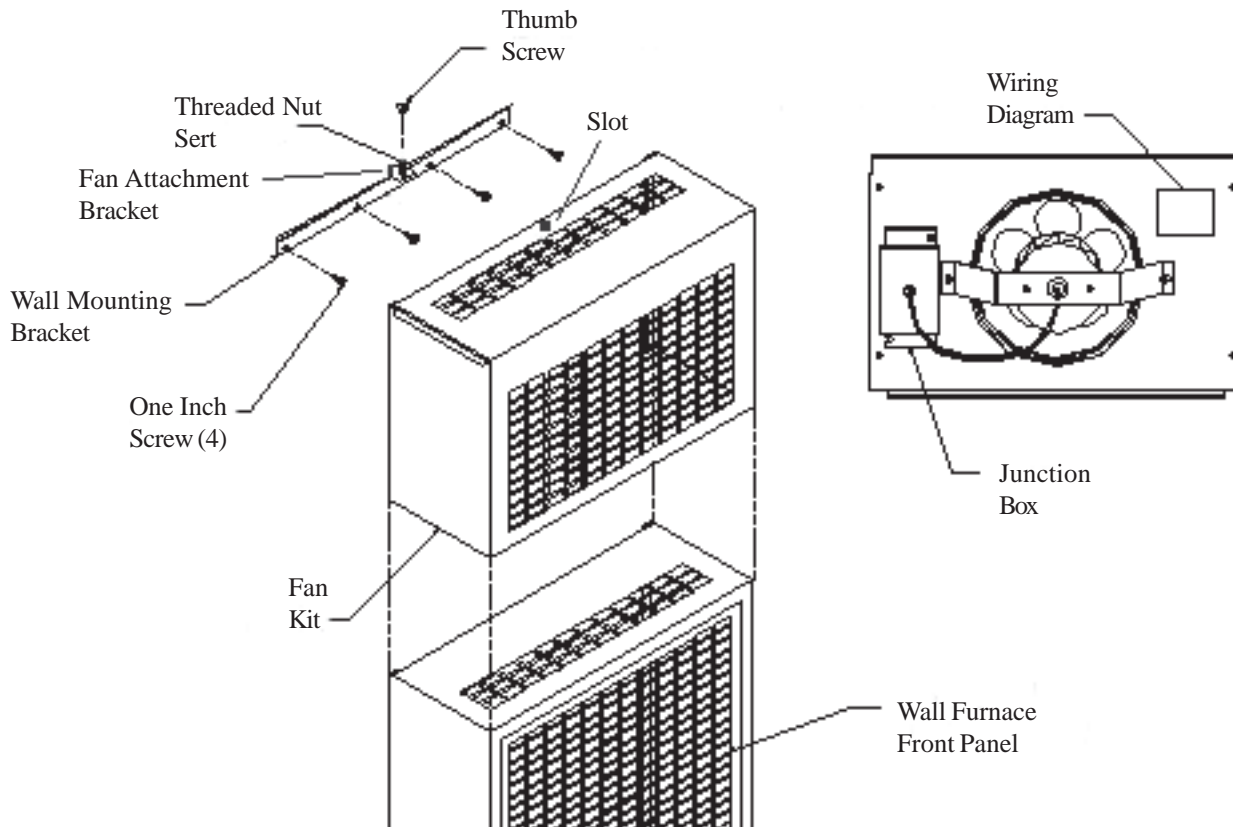
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MODEL WFF81-C OPTIONAL FAN KIT

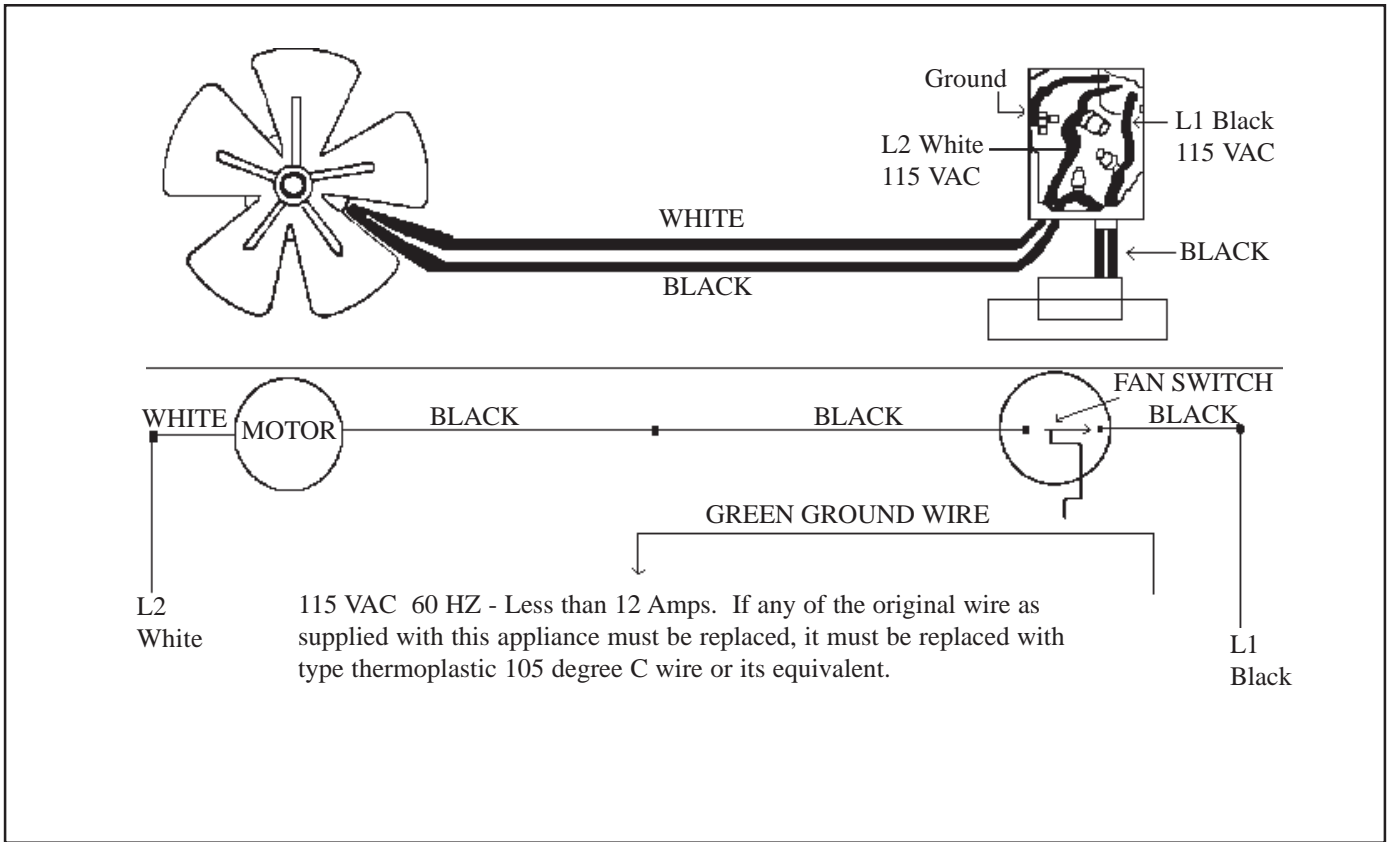
INSTALLATION INSTRUCTIONS

NOTE: This fan kit is to be installed after installation of wall furnace and with the wall furnace front panel in place.

- STEP 1.** This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the latest edition of the National Electric Code, ANSI/NFPA No. 70. In Canada, see the current Canadian Electrical Code CSA C22.1.
- STEP 2.** Set fan kit on top of the wall furnace front panel. Using the back top edge of the fan kit cabinet as a guide, mark a horizontal line across the wall. Mark a small vertical line which aligns with the slot located toward the rear of the fan kit casing.
- STEP 3.** Using the four one inch screws provided, secure the wall mounting bracket to wall 1/8" below the horizontal line. Fan attachment bracket must be up and threaded nut sert aligned with the small vertical line. Note: Anchors (not provided) may be required.
- STEP 4.** Remove junction box and connect 115v power supply in accordance with the wiring diagram. Replace junction box.
- STEP 5.** Set fan kit on top of wall furnace front panel. Slot should align with the nut sert. Secure fan kit to wall mounting bracket with thumb screw provided.



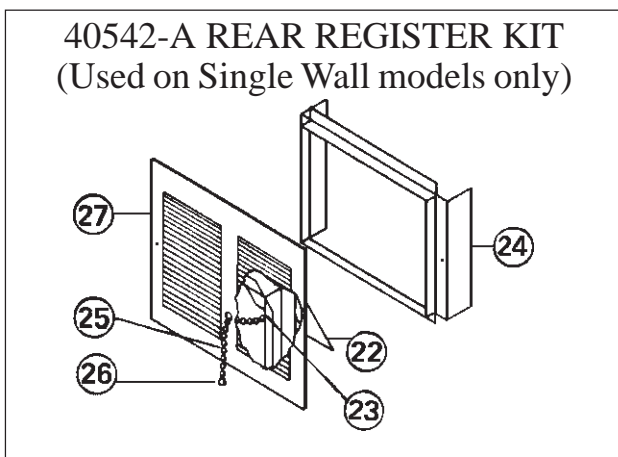
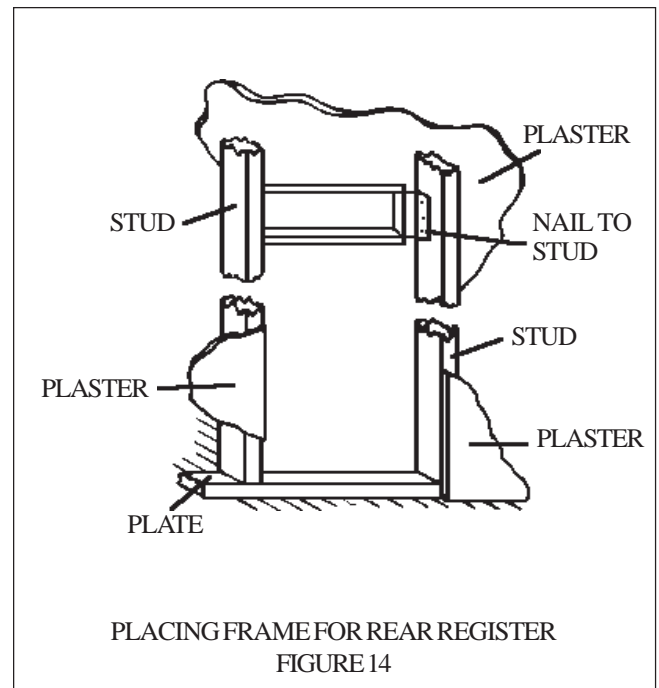
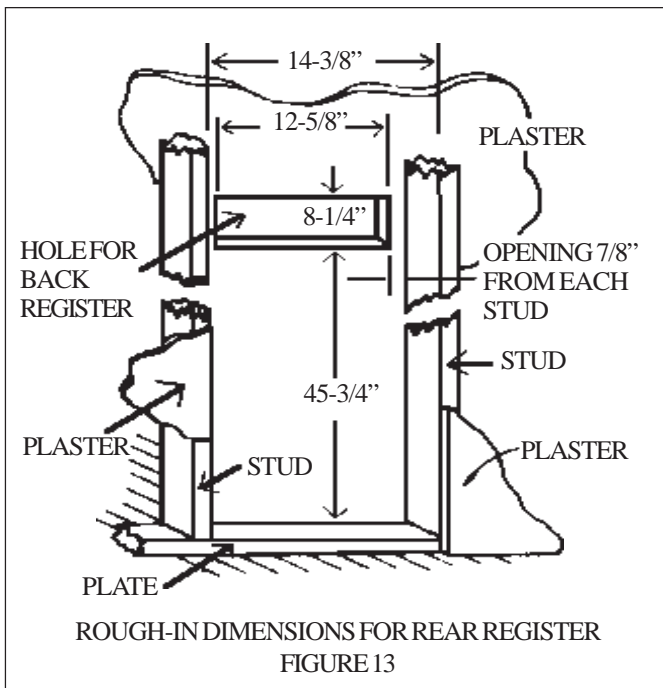
WFF81-C WIRING SCHEMATIC



40542-A REAR REGISTER KIT (Optional Accessory)

INSTALLATION INSTRUCTIONS FOR GRAVITY VENTED WALL FURNACES

- STEP 1. Cut hole within stud space behind heater in the back wall 8-1/4" high by 12-5/8" wide. The lower edge of the hole to be 45-3/4" above the floor plate or 47" from the floor (with standard 2"x4" floor base) as shown in Figure 13.
- STEP 2. Install plaster ground frame for rear register in hole and nail frame to stud as shown in Figure 14.
- STEP 3. REAR REGISTER INSTALLATION: Cut and remove embossed plates in inner and outer casing. Follow instructions for installation of regular furnace.
- STEP 4. After furnace is installed, attach rear register grille as shown in Figures 16 & 17 by insertion over plaster ground and attach with sheet metal screws, provided.
- STEP 5. Damper as shown in Figure 17 can be adjusted from full open for maximum heat to fully closed.



40542 REAR REGISTER KIT (W25/35 Series only)

<u>Part Description</u>	<u>Ref. No.</u>	<u>Part No.</u>
Damper	22	40375
Damper Spring	23	40377
Frame Assembly	24	40365
Register Chain	25	40379
Bell, Pull	26	85003
Register Assembly	27	40355
Installation Instructions	- -	84504

40542-A REAR REGISTER KIT - Continued

INSTALLATION INSTRUCTIONS FOR GRAVITY VENTED WALL FURNACES

