

Coleman 

MOBILE HOME VENTED RECESSED FURNACE

INSTALLATION INSTRUCTIONS

**MODELS
3022 & 3023**

5 ADJUST PILOT AND BURNER FLAME

Remove pilot adjusting screw cover cap from control and turn adjusting screw until pilot burns with a steady, soft blue flame. Light the main burner. Allow to burn with a blue flame for about twenty minutes to warm the heater. Measure the operating manifold pressure with a manometer and adjust as necessary. Loosen the lock nut; then close the air shutter until the flame is yellow or until the screw is all the way "in." Slowly back open the air shutter until a clear blue flame is obtained. Tighten the lock nut.

CAUTION: Be sure to check all gas connections, joints, and caps for leaks with soapsuds.

6 CONVERTING TO L.P. GAS (Model 3023 only)

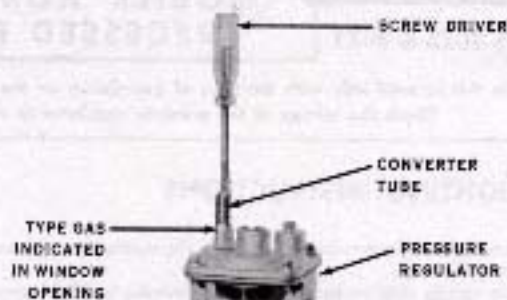


Fig. 4

1. Remove main burner and pilot orifice from burner.
2. Install main burner orifice marked L.P. 49 and install pilot orifice marked .010 (orifices will be found in container).
3. Change pressure regulator. (Fig. 4)
Depress screw in converter tube and turn to lock in place.
4. Letters "L.P." must show in opening on side of tube. (Fig. 4)
5. Attach correct identification gas tag to burner.
6. Test for leaks with soap before lighting.
7. Store Natural Gas orifices and identification tag in orifice container. (Fig. 5)

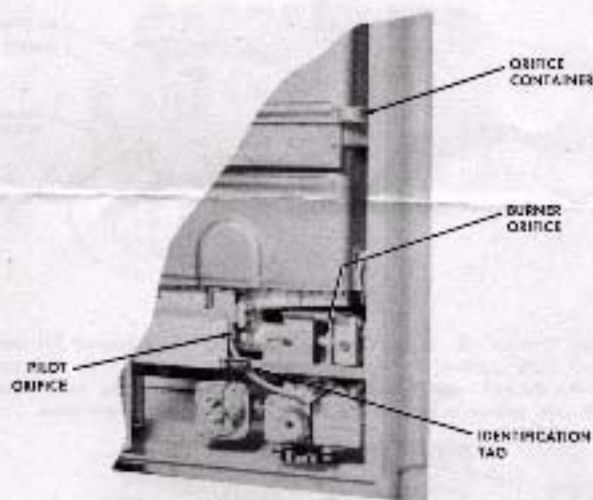


Fig. 5

The Coleman Company, Inc.

MOBILE HOME DIVISION
Wichita 1, Kansas

PLACING FURNACE—Lean the top of the furnace body into the furnace space, putting flue outlet into the flue opening in the header plate. Lift up slightly on furnace body and swing the bottom into the stud space. Center the furnace body in the wall and nail the support legs to the studs. The back spacer lugs should be flush with the back edge of the furnace space (See Figure 4).

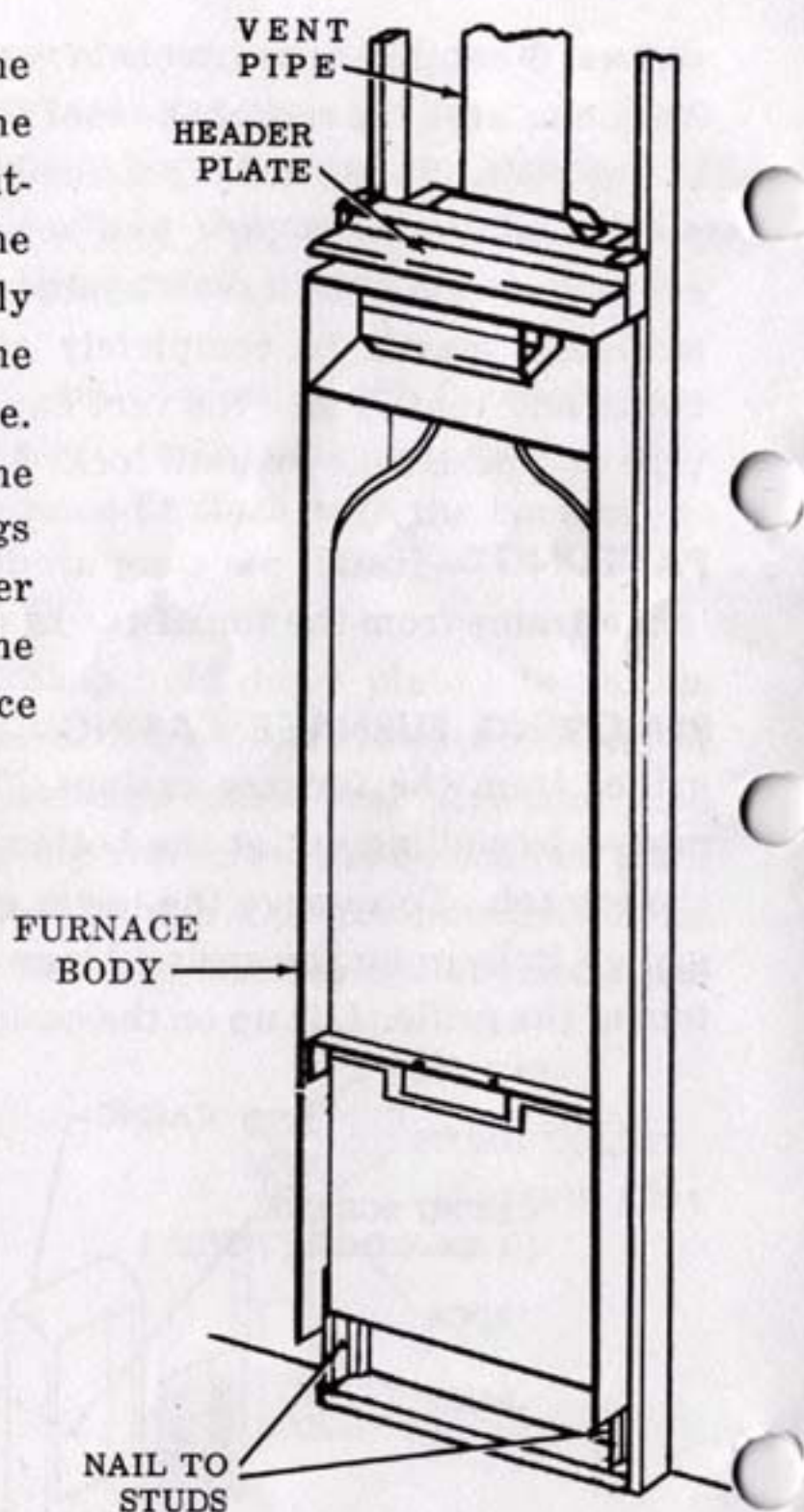


Figure 4.

BURNER INSTALLATION (Model 3022 Only) — Insert the burner support on the left end of the burner into the hole in the left side of the inner casing. Raise the right end of the burner, fitting the burner support brackets inside the two mounting brackets of the right side of the inner casing. When the holes in the two sets of brackets line up, insert the lock pin through the holes and make $\frac{1}{4}$ turn, securing the burner in place. Install the steel washer and brass nut on the burner support on the left side of the burner. Tighten the nut to prevent any movement of the combustion chamber on the burner support (See Figure 5).

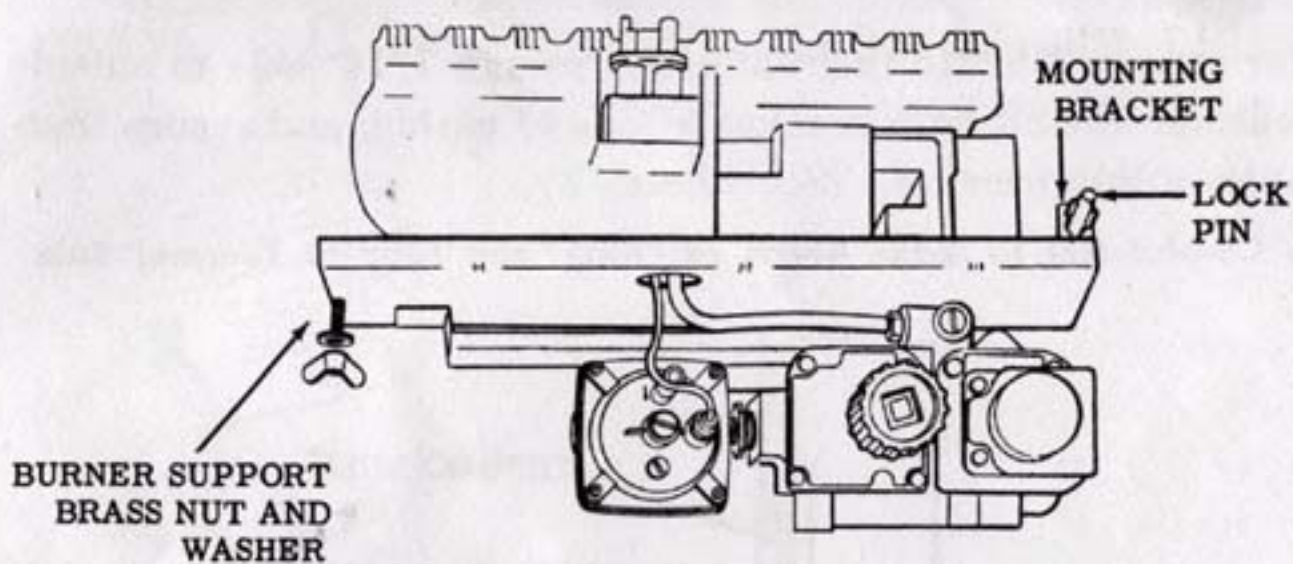


Figure 5.

PIPING — Valve inlet is $\frac{1}{2}$ " I. P. S. Use $\frac{1}{2}$ " line for Nat. Gas. For L. P. Gas a $\frac{3}{8}$ " line can be used if $\frac{1}{2}$ " inlet is bushed down to $\frac{3}{8}$ ". Run the line up through the opening at the furnace location, attaching the line to the gas inlet on the furnace. Use pipe dope on male end of all pipe fittings. Check for leaks with soapsuds after the gas is turned on.

ASSEMBLING CASING AND GRILLES — Install the casing on the furnace body using the four screws provided. Install upper and lower grilles. Assemble knob on lower grille as shown in Figure 6.

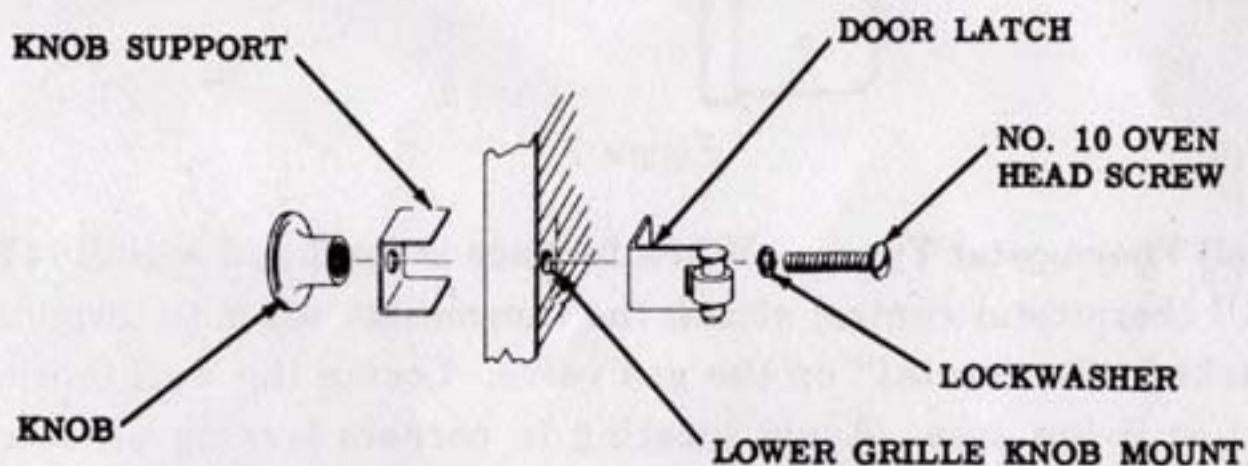


Figure 6.

INSTALLING THERMOSTAT

Thermal Bulb Type — When furnace is equipped with B64YA remote thermal bulb thermostat control (Models 3022 and 3023) install the thermal bulb by stringing it up between the inner and

outer casing. Thread thermal bulb through $7/16$ " hole to outside of casing. Install bulb bracket to side of casing, and secure thermal bulb into bracket. (See Figure 7).

Be Careful Not to Make Bends or "Kink" the Tube to Thermal Bulb

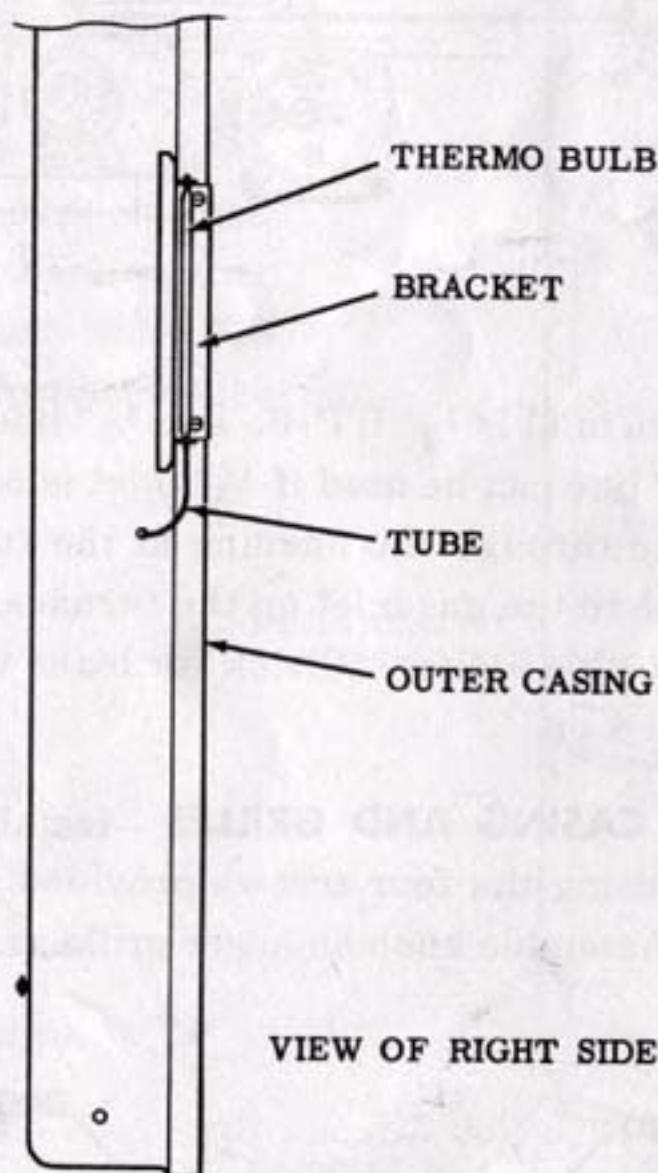


Figure 7.

Wall Thermostat Type — When furnace is equipped with B64YA wall thermostat control attach the thermostat wires to terminals marked "thermostat" on the gas valve. Locate the wall thermostat in living area. Avoid locating in corners lacking air circulation or near sources of heat such as cooking range, lamp, TV set, etc.

The Coleman Company, Inc.

MOBILE HOME DIVISION

WICHITA 1, KANSAS

Coleman MOBILE HOME
VENTED RECESSED FURNACE
MODELS
3022 & 3023



Each of the above model mobile home vented recessed furnaces as approved consists of four major parts:

- 1 The furnace itself consisting of the front panel, casing, heat exchanger, draft hood, burner and gas controls
- 2 The 4-OMVA-C vent assembly consisting of one section of vent pipe, one vent cap, one flashing assembly, one storm collar and one vent hold-down plate.
- 3 One header plate.
- 4 One 3" diameter combustion air tube and screen.

The alteration of these components or the use of other components will void the approval of the equipment.

The installer must familiarize himself with local and state codes before installing.

LOCATION —Furnace should be installed as centrally as possible in order to insure adequate air circulation throughout the coach.

By using a rear register kit, part number 2341-5801, supplementary heat can be discharged into an adjoining bathroom or other small room.

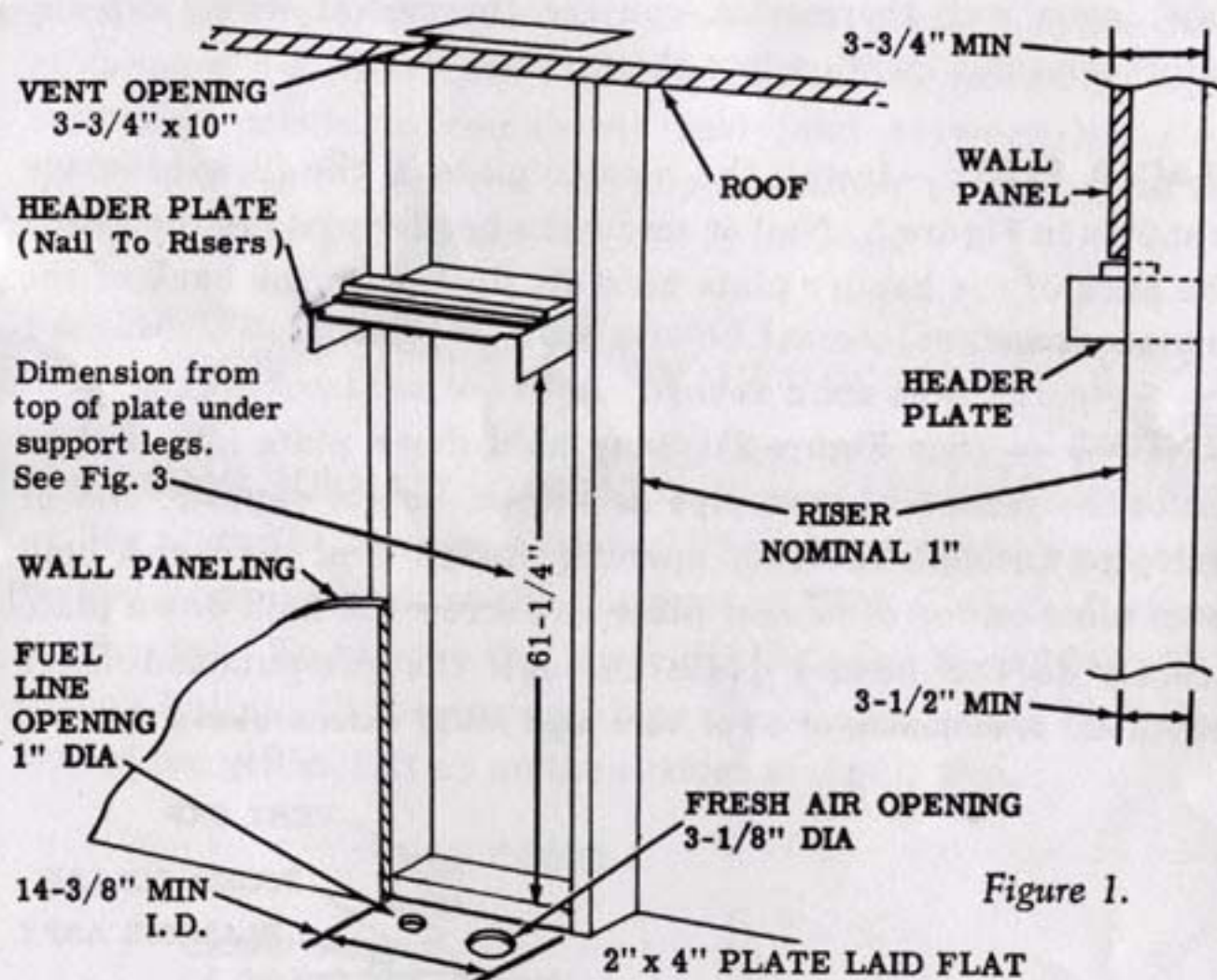


Figure 1.

FURNACE SPACE — The furnace must be mounted in a free space with a minimum $14\frac{3}{8}$ " width and a minimum $3\frac{3}{4}$ " depth. Fabricate risers forming this space from 1"x4" material. A 2"x4" plate must be in place on the floor of the recess. The $61\frac{1}{4}$ " dimension is from the top of the plate to the bottom edge of the flange on the header plate. Enclose the back of the furnace space.

OPENINGS — (See Figure 1). An opening approximately $3\frac{3}{4}$ " x 10" must be cut in the ceiling directly over the furnace location. The centerline of the long axis of this opening should be approximately $1\frac{7}{8}$ " from the inside back surface of the furnace space and the centerline through the short axis should coincide with the centerline of the furnace space. A $3\frac{1}{8}$ " diameter fresh air opening must also be cut through the floor at the furnace location. Insert the 3" diameter fresh air tube through the opening. Make

sure there is no obstruction preventing the free flow of outside air through this tube. Cut a suitable gas line opening in the floor at the left side of the furnace space as shown in Figure 1. If installing a wall thermostat, run the thermostat wire from the wall thermostat location into the furnace space.

HEADER PLATE — Install the header plate in the furnace space as shown in Figure 1. Nail or screw the header plate to the risers. The back of the header plate must fit flush with the back of the furnace space.

VENTING — (See Figure 2). Snap hold down plate into bottom end of the section of vent pipe as shown. Insert opposite end of vent pipe through the roof opening, install vent pipe and hold down plate on top of header plate and screw the hold down plate securely to the header plate through the pre-punched holes provided. **A minimum of 6" of vent pipe MUST extend above the roof**

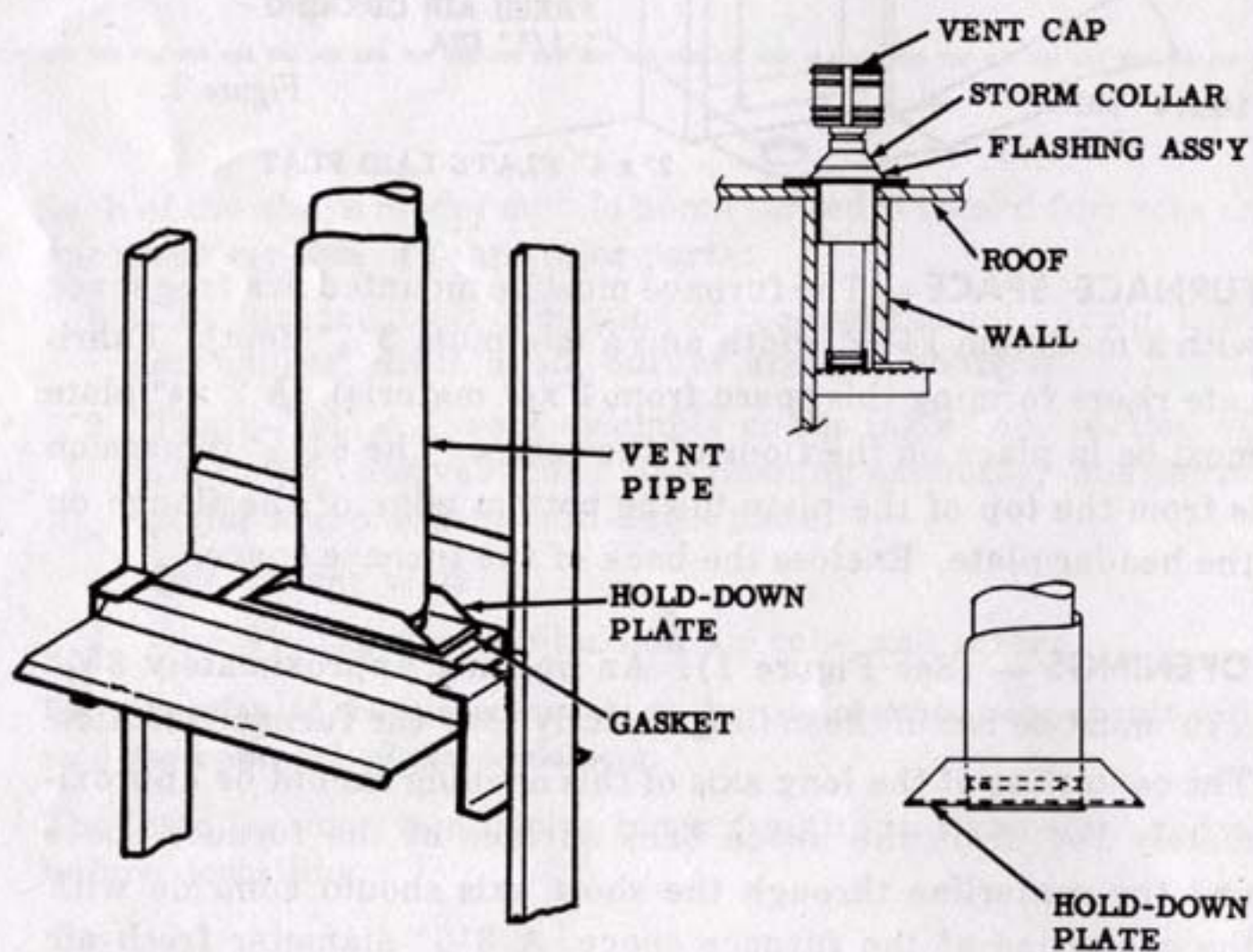


Figure 2.

surface. Vent pipe is available in various lengths of 1" increments. Mastic an area the size of the roof flashing on the exterior surface of the roof. Slide flashing assembly down over the protruding portion of the vent pipe and screw into position. Slide storm collar over vent until it seals against the flashing assembly. Apply sufficient mastic to completely seal joint between the storm collar and vent. Place the vent cap in position on top of the vent pipe and push it down until locked in position.

PANELING — Install paneling around frame, leaving an opening in the frame from the top of the header plate to the floor.

REMOVING FURNACE CASING — Remove the upper and lower grilles from the furnace casings. The upper grilles may be removed by pulling out at the bottom and then down to disengage the top tab. To remove the lower grilles, open by pulling out on grille. Pull up on the spring hinge pin located at the inside bottom of the grille. Lift up on the casings and pull free.

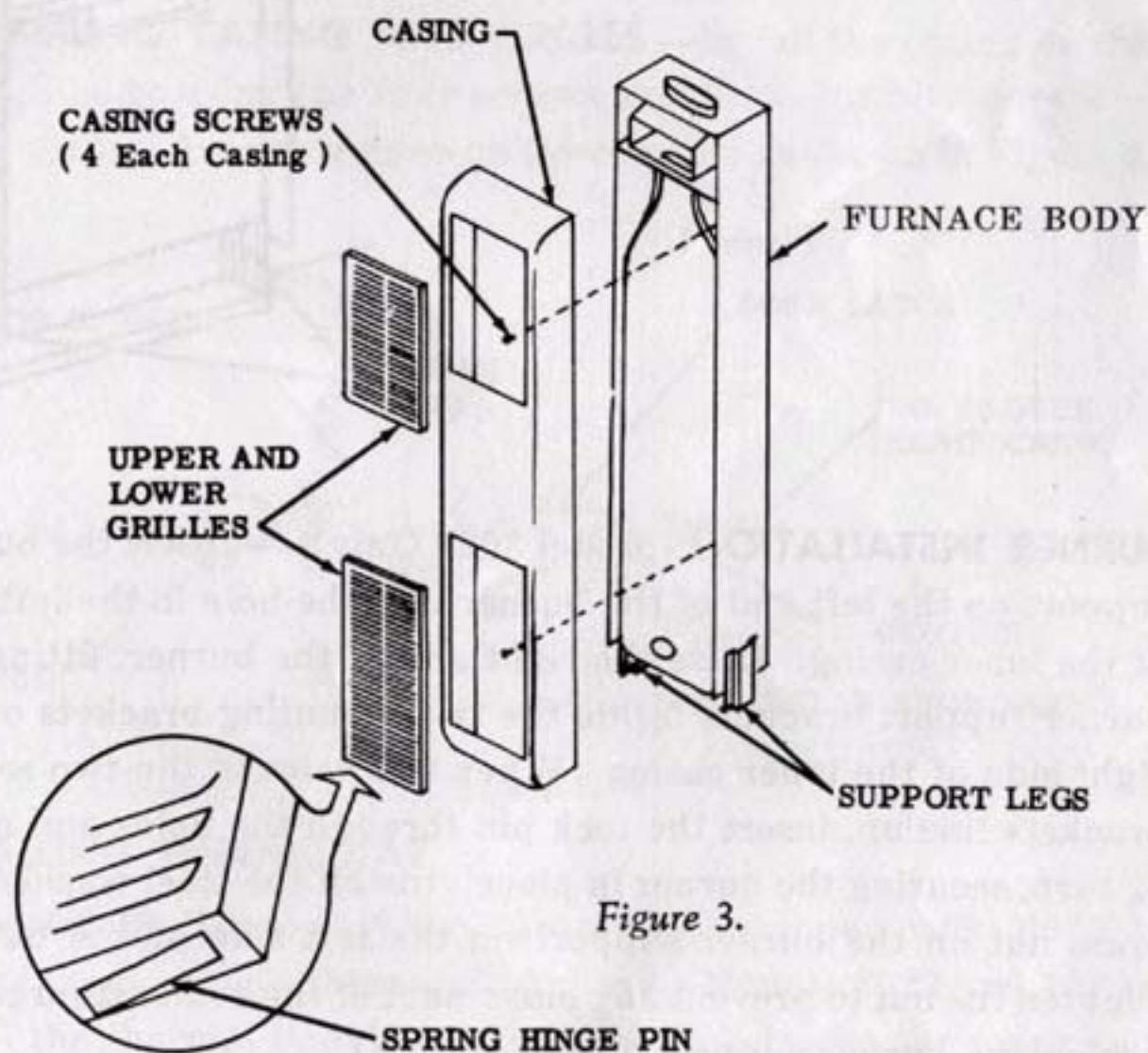


Figure 3.

Use this furnace only with the type of gas shown on the identification tag. The identification tag is located on the pan underneath the burner. Check the setting of the pressure regulator to make sure it is set for the right gas. (See Section 5, "Converting to LP Gas.")

1 LIGHTING INSTRUCTIONS

1. On automatically controlled models set thermostat or temperature dial at lowest setting.
2. Depress spring stop on gas knob. Turn handle to "OFF" position and wait 5 minutes.
3. Turn handle counterclockwise hard against stop and light pilot.
4. Hold for 1 minute or until pilot stays lighted.
5. Turn handle to "ON" position. If automatically controlled, set thermostat or temperature dial to desired setting.
6. If pilot goes out, repeat steps 1-5.

2 BURNER OPERATION

Your Coleman Wall Furnace is equipped with one of three types of burner control: manual, remote thermal bulb, or thermostat.

If your furnace has a manual (MR54) valve: (See Fig. 1) simply determine which control knob setting gives optimum performance and leave the knob set at that position.

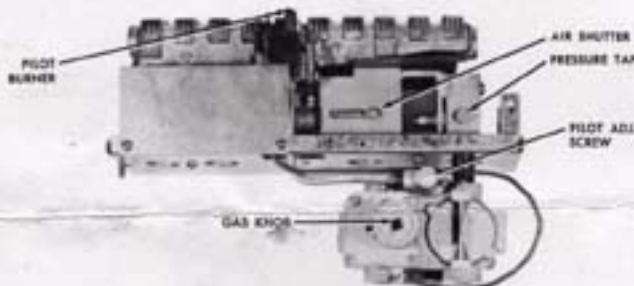


Fig. 1

If your furnace has a B64YA valve (See Fig. 2) equipped for remote thermal bulb control, simply determine which temperature dial setting gives the desired room temperature. Set temperature dial to this setting and burner will cycle on and off to maintain the set temperature.

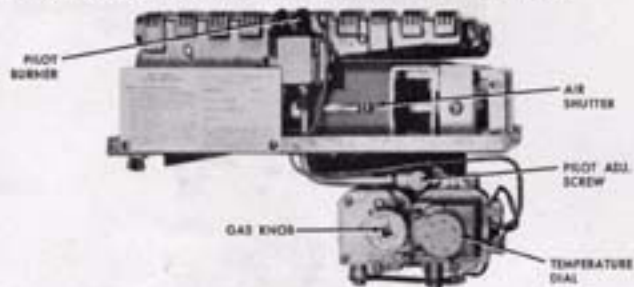


Fig. 2

If your furnace has a B64YA valve equipped for thermostatic control (See Fig. 3), simply set the thermostat at the desired temperature. The burner will function automatically to maintain the set temperature.

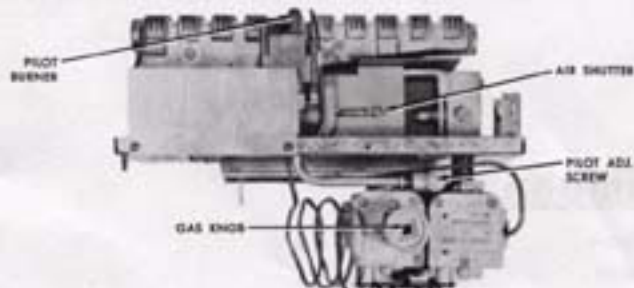


Fig. 3

3 KEEP THE FURNACE CLEAN



VACUUM CLEANER NOZZLE

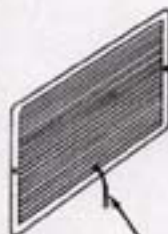
Coleman wall furnaces are built to circulate a large volume of warm air in order to evenly distribute heat throughout the home. Air from the room is drawn into the furnace at floor level and passes through the burner compartment and on up through the furnace.

The air may contain a certain amount of lint and dust which could collect in the air intake of the burner, reducing the amount of air entering the burner, and causing the burner to operate inefficiently. Consequently, it is necessary to keep the burner and air intake free from dust and lint, or any other obstruction.

Open the lower door on the furnace at least once every two weeks, and inspect inside of burner compartment for dust and lint. Turn off the furnace and clean by using a vacuum cleaner. Remove any foreign matter which may be on top of burner or on burner slots. Check to see if lint has collected in air intake.

Put nozzle of vacuum cleaner in burner air intake and suck all lint out. Reverse the hose on the vacuum cleaner and blow any remaining lint out through the burner slots. If vacuum cleaner is not available, use a brush to remove lint out of burner compartment and air intake. Tap burner casing a few times to loosen and remove any foreign matter up inside the burner.

4 HEAT DISTRIBUTION



DAMPER CHAIN



IF YOUR FURNACE HAS A REAR GRILLE:

You can regulate the amount of air being discharged out of the grille by using the damper chain to open and close the damper.

IF YOUR FURNACE HAS A BLOWER:

The switch may be adjusted to automatically regulate the temperature at which the blower begins operating and at which it stops operating. The blower will turn on and off automatically to provide even heat distribution.

5 ADJUST PILOT AND BURNER FLAME

Remove pilot adjusting screw cover cap from control and turn adjusting screw until pilot burns with a steady, soft blue flame. Light the main burner. Allow to burn with a blue flame for about twenty minutes to warm the heater. Measure the operating manifold pressure with a manometer and adjust as necessary. Loosen the lock nut; then close the air shutter until the flame is yellow or until the screw is all the way "in." Slowly back open the air shutter until a clear blue flame is obtained. Tighten the lock nut.

CAUTION: Be sure to check all gas connections, joints, and caps for leaks with soapsuds.

6 CONVERTING TO L.P. GAS (Model 3023 only)

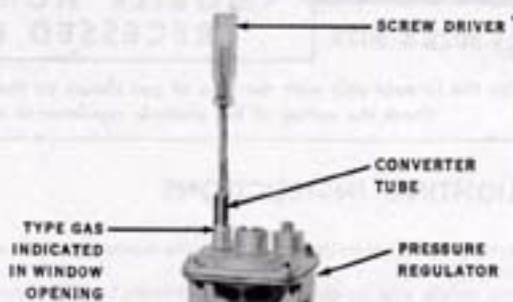


Fig. 4

1. Remove main burner and pilot orifice from burner.
2. Install main burner orifice marked L.P. 49 and install pilot orifice marked .010 (orifices will be found in container).
3. Change pressure regulator. (Fig. 4)
Depress screw in converter tube and turn to lock in place.
4. Letters "L.P." must show in opening on side of tube. (Fig. 4)
5. Attach correct identification gas tag to burner.
6. Test for leaks with soap before lighting.
7. Store Natural Gas orifices and identification tag in orifice container. (Fig. 5)

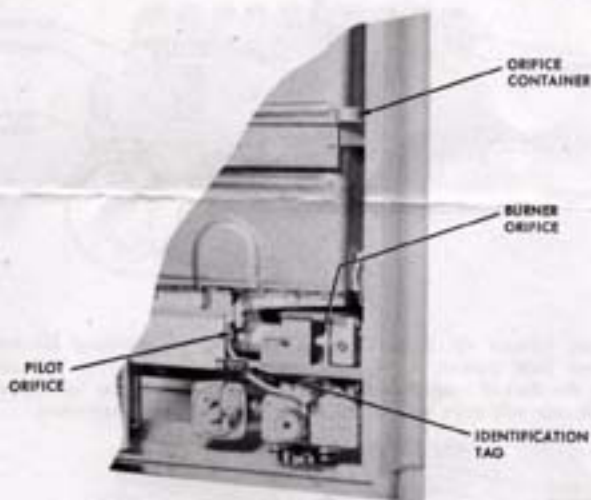


Fig. 5

The Coleman Company, Inc.

MOBILE HOME DIVISION
Wichita 1, Kansas

PLACING FURNACE—Lean the top of the furnace body into the furnace space, putting flue outlet into the flue opening in the header plate. Lift up slightly on furnace body and swing the bottom into the stud space. Center the furnace body in the wall and nail the support legs to the studs. The back spacer lugs should be flush with the back edge of the furnace space (See Figure 4).

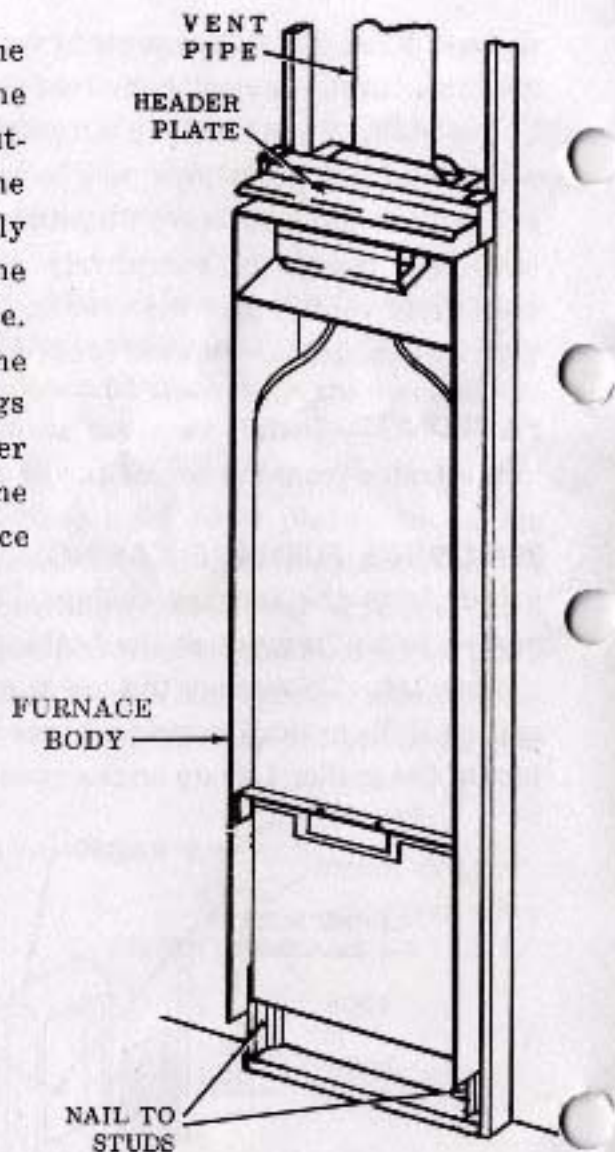


Figure 4.

BURNER INSTALLATION (Model 3022 Only) — Insert the burner support on the left end of the burner into the hole in the left side of the inner casing. Raise the right end of the burner, fitting the burner support brackets inside the two mounting brackets of the right side of the inner casing. When the holes in the two sets of brackets line up, insert the lock pin through the holes and make $\frac{1}{4}$ turn, securing the burner in place. Install the steel washer and brass nut on the burner support on the left side of the burner. Tighten the nut to prevent any movement of the combustion chamber on the burner support (See Figure 5).

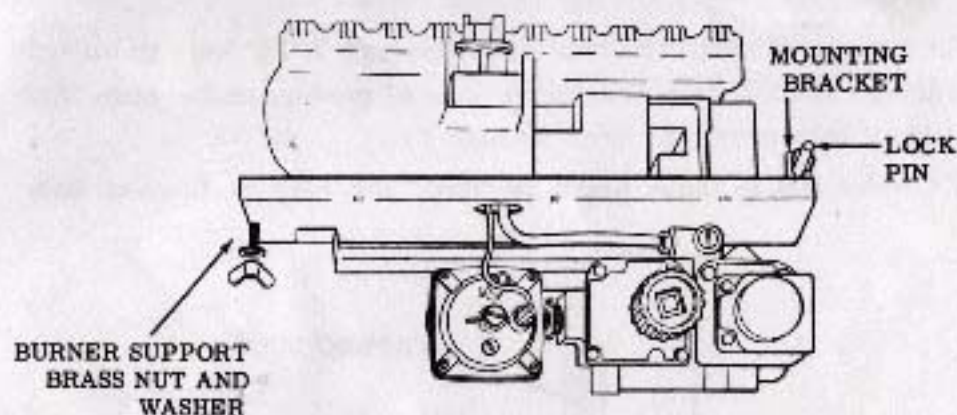


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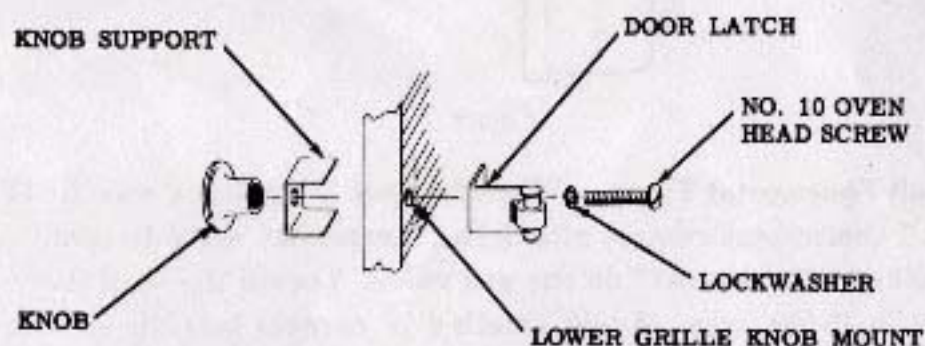


Figure 6.

INSTALLING THERMOSTAT

Thermal Bulb Type — When furnace is equipped with B64YA remote thermal bulb thermostat control (Models 3022 and 3023) install the thermal bulb by stringing it up between the inner and

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Be Careful Not to Make Bends or "Kink" the Tube to Thermal Bulb

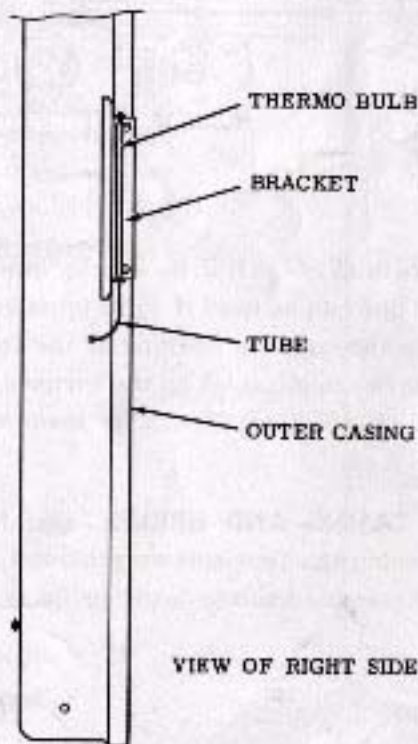


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MOBILE HOME DIVISION

WICHITA 1, KANSAS

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**MOBILE HOME
VENTED RECESSED FURNACE**

INSTALLATION INSTRUCTIONS

**MODELS
3022 & 3023**

Coleman MOBILE HOME
VENTED RECESSED FURNACE

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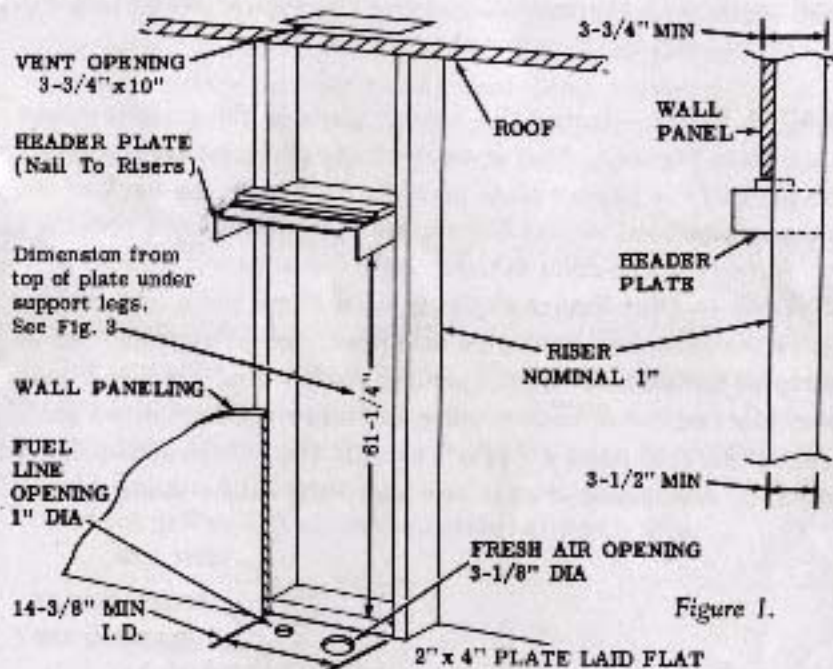


Figure 1.

FURNACE SPACE— The furnace must be mounted in a free space with a minimum $14\frac{3}{8}$ " width and a minimum $3\frac{3}{4}$ " depth. Fabricate risers forming this space from 1"x4" material. A 2"x4" plate must be in place on the floor of the recess. The $61\frac{1}{4}$ " dimension is from the top of the plate to the bottom edge of the flange on the header plate. Enclose the back of the furnace space.

OPENINGS — (See Figure 1). An opening approximately $3\frac{3}{4}$ " x 10" must be cut in the ceiling directly over the furnace location. The centerline of the long axis of this opening should be approximately $17\frac{1}{8}$ " from the inside back surface of the furnace space and the centerline through the short axis should coincide with the centerline of the furnace space. A $3\frac{1}{8}$ " diameter fresh air opening must also be cut through the floor at the furnace location. Insert the 3" diameter fresh air tube through the opening. Make

sure there is no obstruction preventing the free flow of outside air through this tube. Cut a suitable gas line opening in the floor at the left side of the furnace space as shown in Figure 1. If installing a wall thermostat, run the thermostat wire from the wall thermostat location into the furnace space.

HEADER PLATE — Install the header plate in the furnace space as shown in Figure 1. Nail or screw the header plate to the risers. The back of the header plate must fit flush with the back of the furnace space.

VENTING — (See Figure 2). Snap hold down plate into bottom end of the section of vent pipe as shown. Insert opposite end of vent pipe through the roof opening, install vent pipe and hold down plate on top of header plate and screw the hold down plate securely to the header plate through the pre-punched holes provided. **A minimum of 6" of vent pipe MUST extend above the roof**

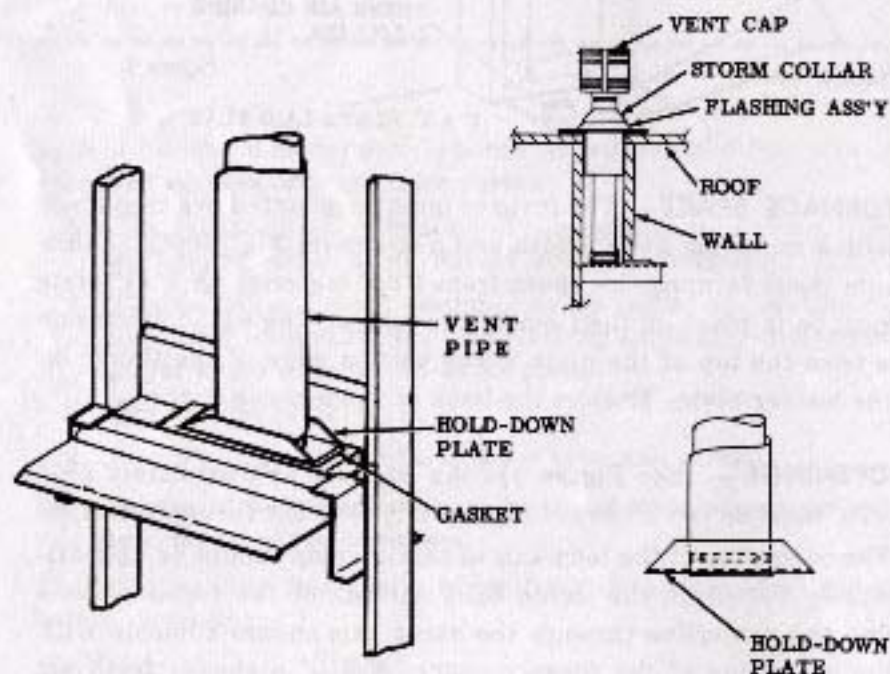


Figure 2.

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PANELING — Install paneling around frame, leaving an opening in the frame from the top of the header plate to the floor.

REMOVING FURNACE CASING — Remove the upper and lower grilles from the furnace casings. The upper grilles may be removed by pulling out at the bottom and then down to disengage the top tab. To remove the lower grilles, open by pulling out on grille. Pull up on the spring hinge pin located at the inside bottom of the grille. Lift up on the casings and pull free.

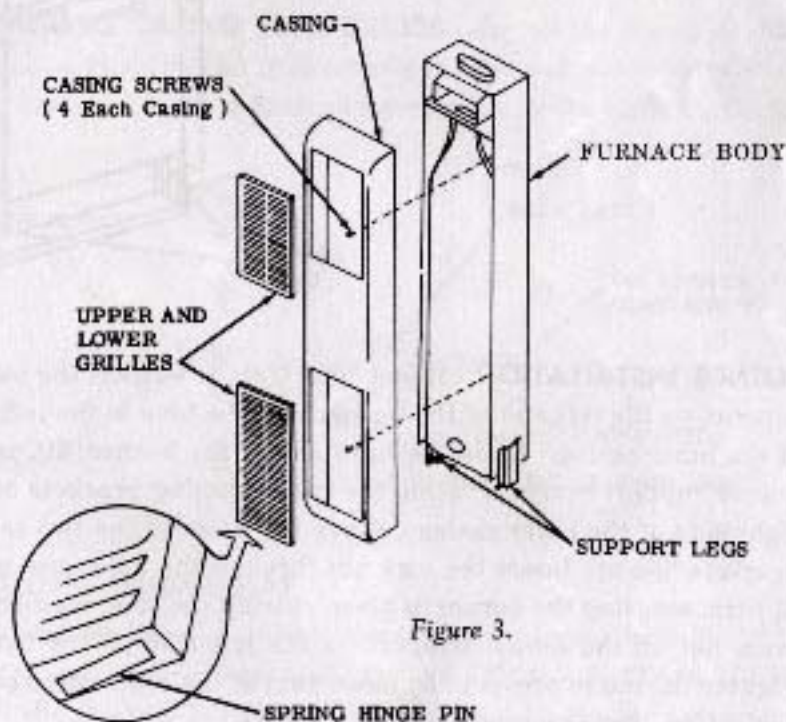


Figure 3.

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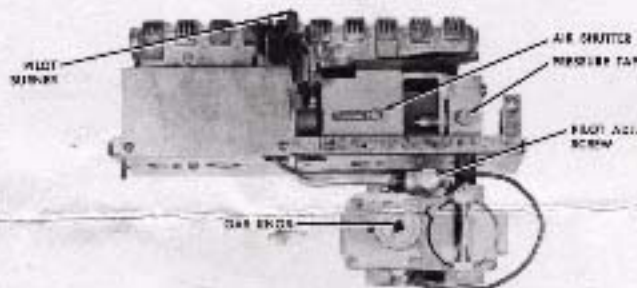


Fig. 1

If your furnace has a B64YA valve (See Fig. 2) equipped for remote thermal bulb control, simply determine which temperature dial setting gives the desired room temperature. Set temperature dial to this setting and burner will cycle on and off to maintain the set temperature.

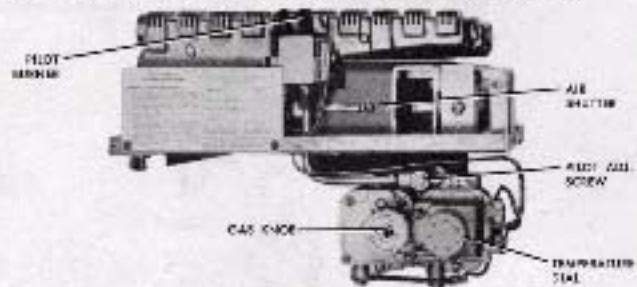


Fig. 2

If your furnace has a B64YA valve equipped for thermostatic control (See Fig. 3), simply set the thermostat at the desired temperature. The burner will function automatically to maintain the set temperature.

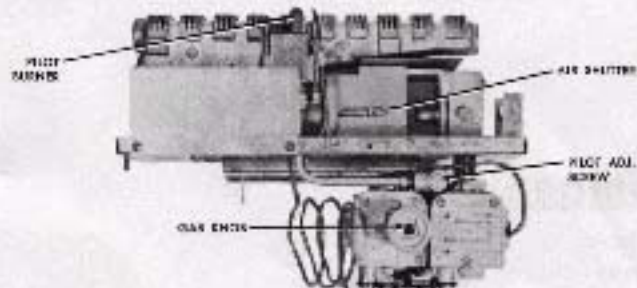
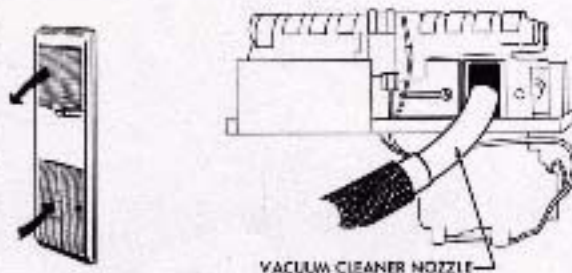


Fig. 3

3 KEEP THE FURNACE CLEAN



VACUUM CLEANER NOZZLE

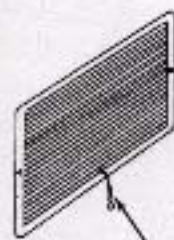
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The air may contain a certain amount of lint and dust which could collect in the air intake of the burner, reducing the amount of air entering the burner, and causing the burner to operate inefficiently. Consequently, it is necessary to keep the burner and air intake free from dust and lint, or any other obstruction.

Open the lower door on the furnace at least once every two weeks, and inspect inside of burner compartment for dust and lint. Turn off the furnace and clean by using a vacuum cleaner. Remove any foreign matter which may be on top of burner or on burner slots. Check to see if lint has collected in air intake.

Put nozzle of vacuum cleaner in burner air intake and suck all lint out. Reverse the hose on the vacuum cleaner and blow any remaining lint out through the burner slots. If vacuum cleaner is not available, use a brush to remove lint out of burner compartment and air intake. Tap burner casing a few times to loosen and remove any foreign matter up inside the burner.

4 HEAT DISTRIBUTION



DAMPER CHAIN



IF YOUR FURNACE HAS A REAR GRILLE:

You can regulate the amount of air being discharged out of the grille by using the damper chain to open and close the damper.

IF YOUR FURNACE HAS A BLOWER:

The switch may be adjusted to automatically regulate the temperature at which the blower begins operating and at which it stops operating. The blower will turn on and off automatically to provide even heat distribution.