

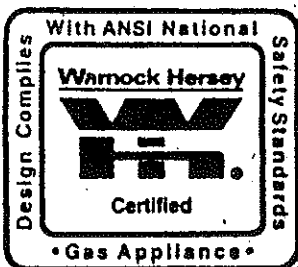
INSTALLATION MANUAL

Kozy Heat

MODEL - KLS45

GAS LOG CONVERSION SET

**#545 - NATURAL GAS
#546 - LP GAS**



REVISED 10/96

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IMPORTANT:

**READ THIS MANUAL BEFORE INSTALLING
AND USING THIS GAS LOG SET**

**GAS LOG SET MODEL KLS545(NAT) & KLS546(LP)
INSTALLATION INSTRUCTIONS**

Installation and/or repair of this appliance should only be done by a qualified installer.

This appliance has been tested to and complies with ANSI Z21.60-1991. Installation must conform with local building codes, or, in the absence of local building codes, with the national fuel gas code, ANSI Z223.1-1992 NFPA 54(88).

FOR YOUR SAFETY

WHAT TO DO IF YOU SMELL GAS

- * Do not try to light any appliance
- * Do not touch any electrical 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.
- * Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING: 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.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual for assistance. For additional information, consult a qualified installer, service agency or the gas supplier.

This appliance is certified for use only with Kozy Heat fireplace models 231, 231 ZC, 232, 234, 430 and 432.

A) RUN THE GAS LINE. See Figure 1.

NOTE: This millivolt board is equipped with a 3/8" flexible gas line, 18" long.

CAUTION: Installation of the gas line must only be done by a qualified person in accordance with local building codes.

NOTE: The gas line should be run to the point of connection where the manual shut-off valve and flexible gas tubing will attach.

1. Run the gas line. An accessible shut off valve (provided) must be installed up stream from the regulator.

NOTE: NATURAL GAS ONLY:
The minimum inlet gas supply pressure is 5.0 inches W.C.
The maximum inlet gas supply pressure is 10.5 inches W.C.

LP GAS ONLY:
The minimum inlet gas supply pressure is 11.0 inches W.C.
The maximum inlet gas supply pressure is 13.0 inches W.C.

2. This unit is designed to accept either a 3/8" or 1/2" gas line approved for gas appliances. Consult local building codes to properly size the gas supply line leading to a 3/8" reduction. Also, see the chart below for proper supply line sizing.

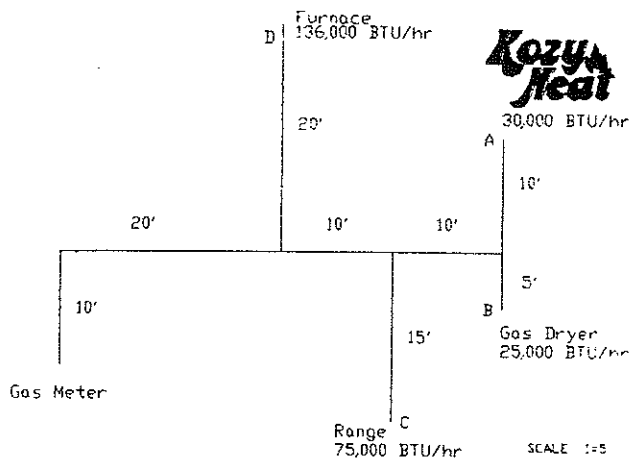
3. Connect the gas line to the manual shut-off valve.

4. Complete installation of the gas line.

Input 45,000 BTU's NAT
Input 45,000 BTU's LP

| Tubing Size | Max. Run |
|-------------|----------|
| 3/8" | 10' |
| 1/2" | 70' |
| 5/8" | 100' |
| 3/4" | 125' |

FIG. 1



Solution to Example:
(1) Maximum demand for outlet *A* 30 CFH
 B 25 CFH
 C 75 CFH
 D 136 CFH

TOTAL DEMAND 266 CFH

(2) The length of pipe from the gas meter to the most remote outlet (Outlet *A*) is 60'.
THIS IS THE ONLY DISTANCE USED.
(3) Using horizontal line marked 60', Outlet *A* supplying 30 cubic feet an hour requires 1/2 inch pipe. Outlet *B* supplying 25 cubic feet an hour requires 1/2 inch pipe. Section 1 supplying outlets *A* and *B*, 55 cubic feet an hour required 1/2 inch pipe.

B) PREPARE THE OPENING. See Figure 2.

1. Thoroughly clean all ashes from the Kozy Heat unit. Vacuum as necessary.
2. Remove all firebrick from the sides, back, and bottom of the unit.
3. If possible, remove the lower grill for easier installation.
4. A template for installing the regulator board is included in the box. It is located under the regulator board. Cut the template out on the line, and punch out the four - 1/4" holes.
5. Locate the center line of the unit (from side to side) and mark, using the soapstone (provided).
6. Lay the template inside the box, lining up the center line marks, and mark the oval hole and the four - 1/4" holes.
7. Prepare to cut the holes. Use a cutting torch or a saber (reciprocating) saw with a metal blade.

CAUTION: The doors should be fully opened, and covered, or removed to prevent damage from pitting, etc. Also, the flooring in front of the unit should be covered with a non-combustible protectant.

8. Cut the oval hole and cut or punch the 1/4" holes from the units floor. Carefully remove and discard the cut-outs.

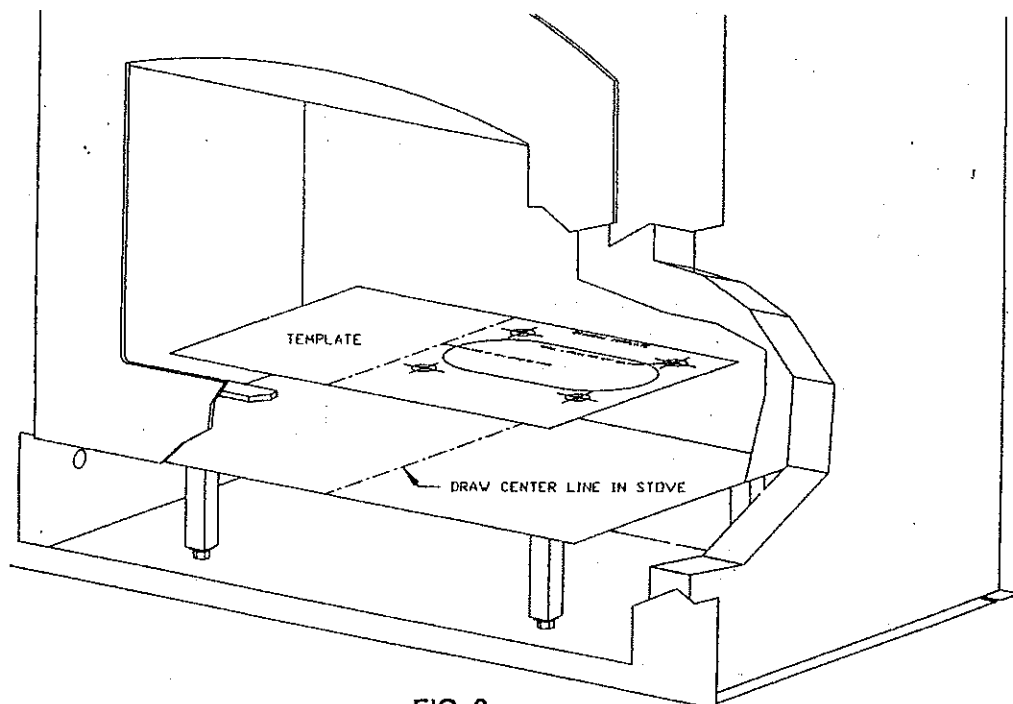


FIG. 2

C) CLOSE OFF PRIMARY AIR. / CHIMNEY DAMPER See Figure 3.

1. The air intake must be closed and blocked off when the KLS is in operation.
2. An adequate section of insulation is included to block off the air intake. Cut the insulation to the measurements for your fireplace based on the chart below. A utility knife works well.
3. Place the insulation into the opening between the unit and the air intake baffle. This baffle is located at the top front of the unit, just inside the doors. The insulation will close off the intake baffle.
4. The chimney damper of the fireplace must be kept closed during operation.

NOTE: A chimney plate (included) should be placed on top of the chimney to reduce the chimney outlet to 4".

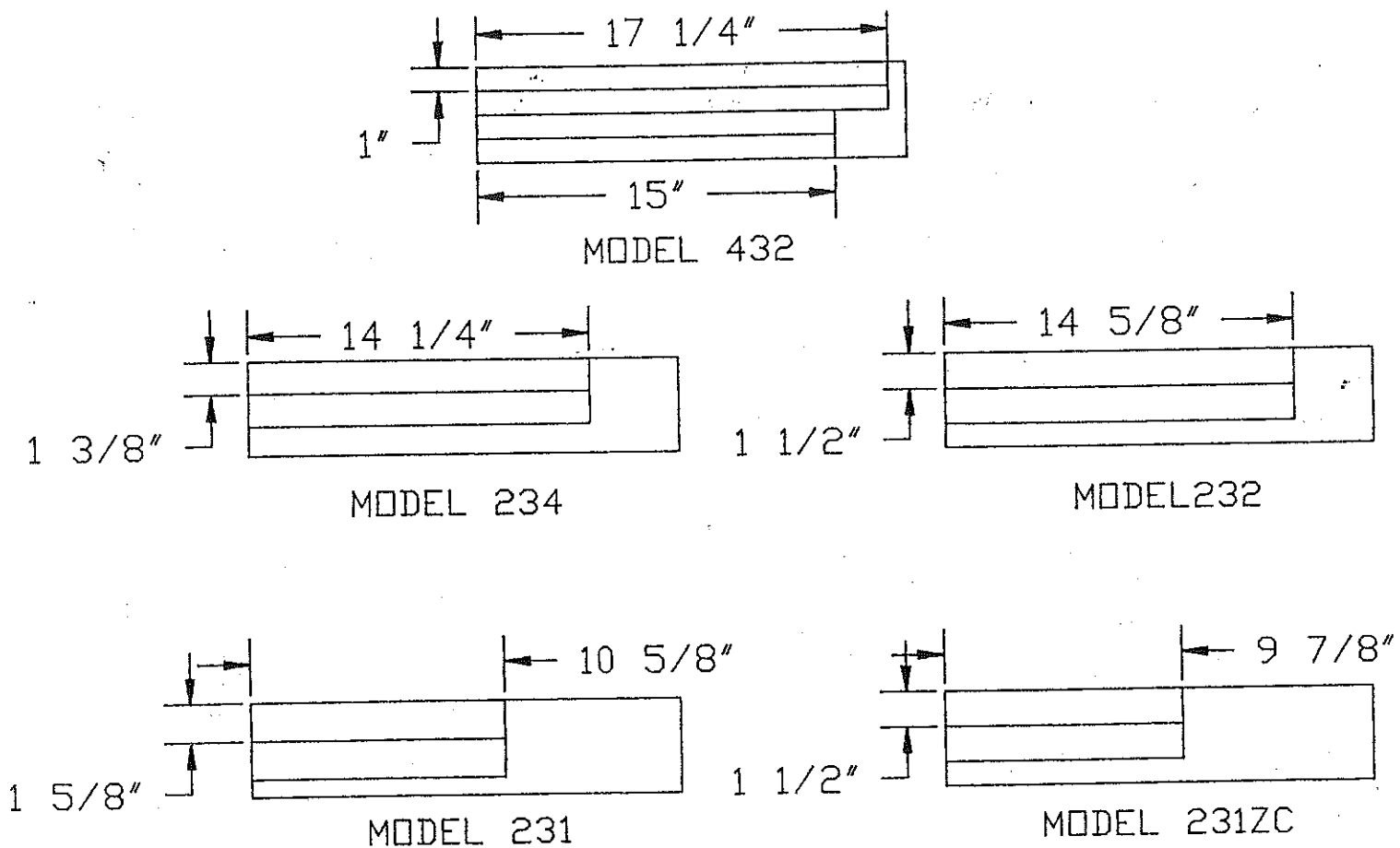


FIG. 3

D) REGULATOR BOARD INSTALLATION. See Figure 4.

1. Install the four, 1-1/2" bolts (A) from underneath the unit, and place one, 1/4" nut (B) onto each bolt followed by one, 3/4" spacer (C).
2. Grasp the burner with both hands and place into the unit, lining up with the four 1/4" bolts.

CAUTION: Before securing the board into place, make sure that all of the wires (attached under the board) are clear and unobstructed.

3. Attach the remaining 1/4" nuts (D).
4. Connect the regulator board to the gas line.

NOTE: If you are installing this system in a masonry unit which has a lower grill placed in the hearth, an extension kit #954-51 may be purchased through your local dealer. Follow installation instructions included with the extension kit. A maximum length of 4' is recommended. Note: Wires should be spliced by the valve control.

NOTE: This appliance is equipped with a safety shut-off switch.. The burner will automatically shut off should a down draft occur.

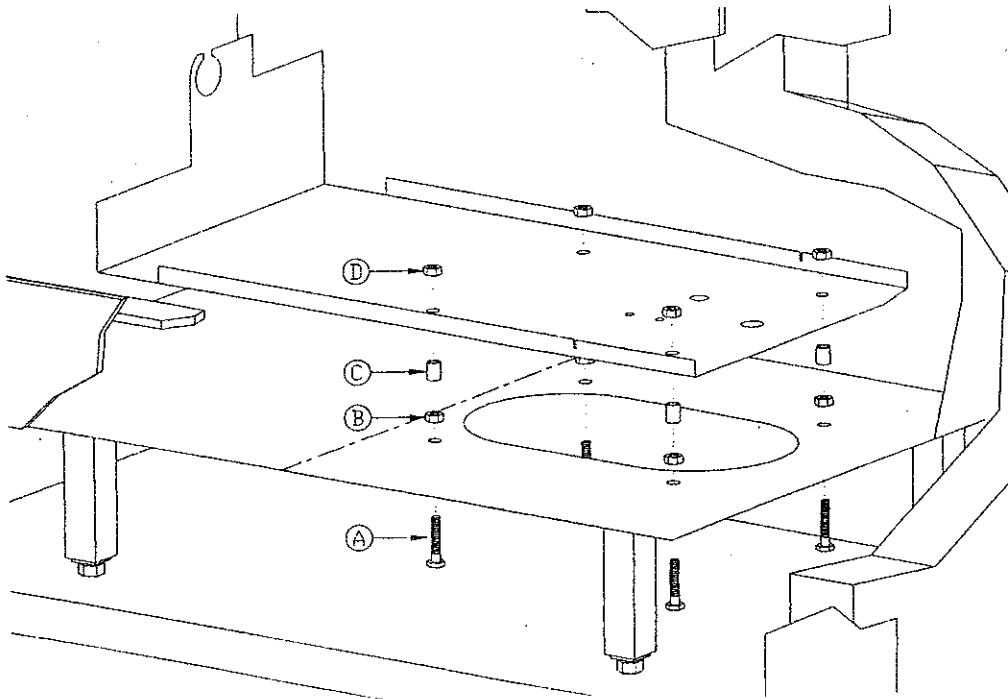


FIG. 4

E) LOG INSTALLATION

This log set includes:

| | |
|---------------------------------------|-----------------------------------|
| 1 - #545-502 Back log [A] | 1 - #545-501 Front log [B] |
| 1 - #545-503 Top 'Y' log [C] | 1 - #741-510 Top knothole log [D] |
| 1 - #741-511 Top Right Curved Log [E] | 1 - #700-160 Bark log [F] |

1. Position back log [A] so that notched out area on the right side is over the pilot/generator.
2. Place front log [B] so notched-out area on the bottom left is over the curved of the burner tube.
3. Set the remaining 3 logs [C, D, & E] in place over the lower logs as shown to avoid excess impingement.
4. Center bark log [F], painted edge up, in front of the burner tube so it sets on the firebox floor and lean it against the burner tube.
5. Adjust log placement during initial light up procedures to avoid excessive impingement and possible delayed

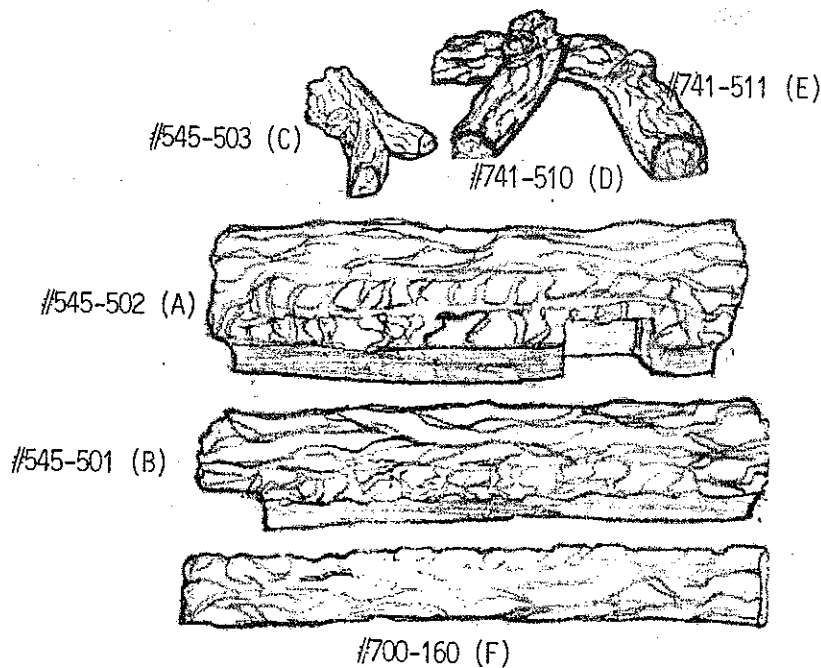


FIG. 5

Initial Burn Period

Due to the makeup of the split fiber logs, the curing process may take up to 6 hours of burn time. During this period, the logs will give off a strong odor, and will discolor. Once they have gone through the initial burn period, the true color of the logs will return and the smell will not reoccur.

F) WALL SWITCH - REMOTE CONTROL INSTALLATION (opt.) See Fig 6.

CAUTION: DO NOT CONNECT HIGH VOLTAGE WIRE TO THE SWITCH!

1. If desired, a wall switch, or remote control unit may be used to turn the unit off and on.

NOTE: Installation of a wall switch should only be done by a qualified installer.

2. Run low-voltage (thermostat) wire from the on/off switch, to the desired location of the wall switch. Do not run wire more than 30'.

3. Disconnect the rocker switch connection from the top terminal on the valve.

4. Attach a female disconnect to one of the on / off switch wires and connect to the top terminal on the valve. Attach remaining on/off switch wire to the bottom terminal screw using a spade (fork) connector.

NOTE: If using a remote control, a 9-volt battery is required in the receiver as well as the sender. No high voltage is required. Follow instructions included with the remote control for proper installation.

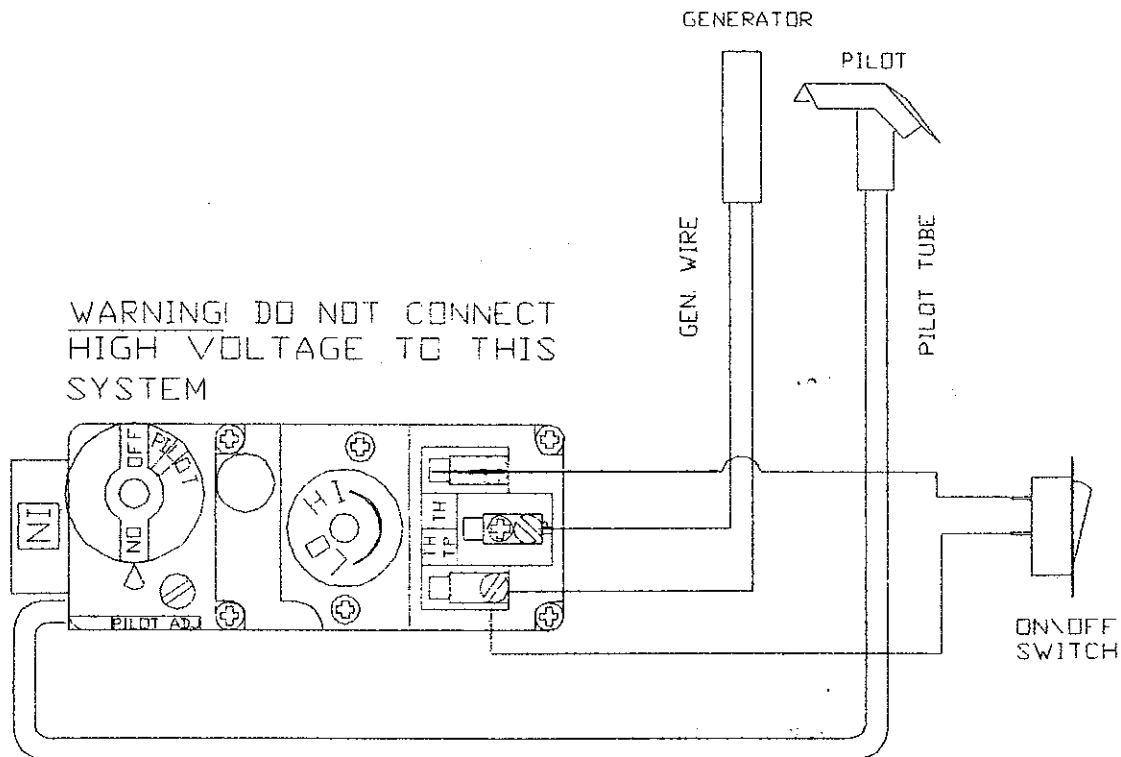


FIG. 6

G) LIGHTING AND SHUTDOWN. See Figure 7.


NOTE: Prior to lighting, check all fittings for leakage. This is accomplished by applying soapy water on all connections made. If there is any leakage bubbles will appear at the point of connections. If bubbles occur, tighten the fittings until the bubbles no longer appear. All connections made at the factory have been previously tested.

NOTE: The appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas line at test pressures equal to or less than 1/2 psig (3.5 kPa).

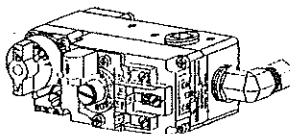
Pressure check taps for both the manifold (outgoing) and inlet (incoming) pressures are located in front of the gas valve. The top pressure tap is the manifold pressure and the bottom pressure tap is the incoming pressure. Follow instructions on page 11 for checking these pressures.

NOTE: The chimney damper of the fireplace must be kept closed during operation.

NOTE: Read 1-7 before lighting the unit for the first time.

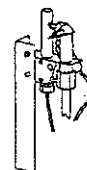
1. Turn off all electric power to the appliance.
2. Push in gas control knob slightly and turn clockwise  to "OFF"


Gas control knob
shown in "on" position



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

3. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow the safety information on page 2 of this installation manual. If you don't smell gas, go to the next step.



4. Find the pilot - follow metal tube from gas control. The pilot is behind the burner tube.
5. Turn knob on gas control counterclockwise  to "PILOT"
6. Push in control knob all the way and hold in. Press the RED igniter button. The pilot will generally light with two or three pushes on the igniter. Hold for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 2 through 6.

- * 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.

7. Turn gas control knob counterclockwise  to "ON".

8. Flip the on/off switch (B) to the "on" position, the red is exposed.

NOTE: When the unit is initially lit, condensation will appear on the glass, this is normal in all gas fireplaces, and will disappear in one to three minutes.

9. If you wish to turn the burner off, flip the on/off switch. If a wall switch has been installed, simply turn it off.

NOTE: The pilot will stay lit.

10. To turn off the pilot, push in and turn the valve to the off position.

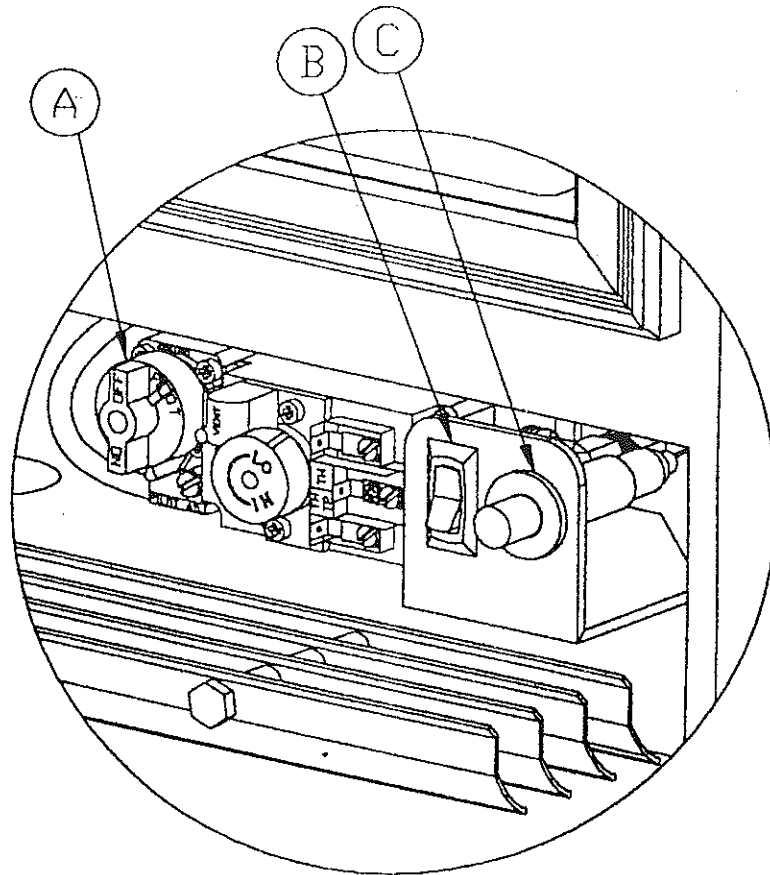


FIG. 7

NOTE: CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURE AND SHOULD STAY AWAY TO AVOID BURNS OR CLOTHING IGNITION. YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

CLOTHING OR OTHER FLAMMABLE MATERIAL SHOULD NOT BE PLACED ON OR NEAR THE APPLIANCE.

H) PRESSURE TESTING : MANIFOLD & INLET PRESSURE

TO CHECK THE MANIFOLD PRESSURE:

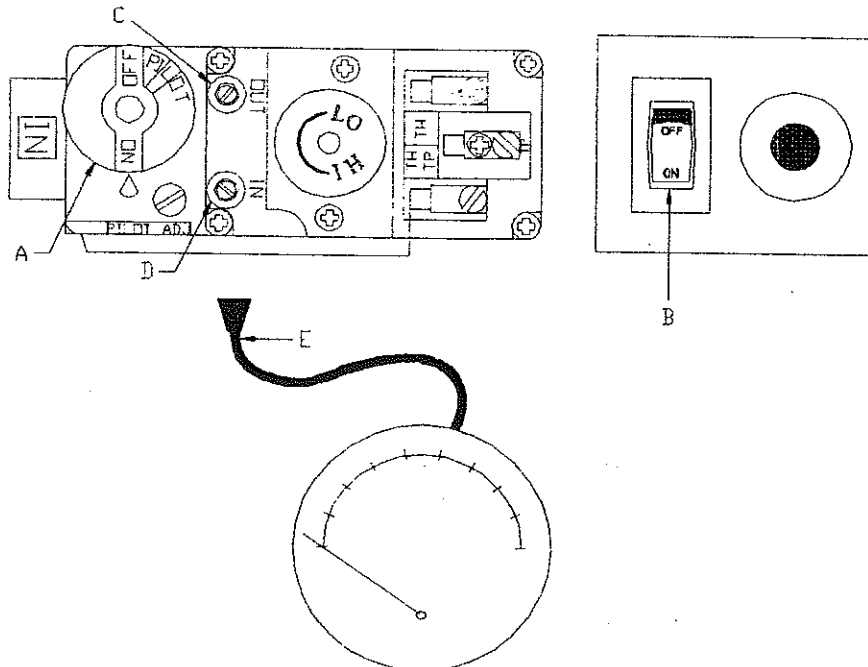
1. Light pilot .
2. Loosen the manifold pressure tap [C] by turning the screw counter-clockwise.
3. Attach manometer to pressure tap using a 5/16" I.D. hose [E].
4. Turn black control knob [A] to the 'on' position.
5. Turn the burner on by depressing the rocker switch [B] to expose the 'red' and note manometer reading.
5. Turn the rocker switch [B] to the 'off' position.
6. Disconnect manometer hose and tighten screw (clockwise).
Screw should be snug, do not over tighten.
7. Attach manometer to manifold pressure tap to verify that it is completely sealed.
Manometer should read no pressure when the rocker switch is turned on.

NOTE: If manifold pressure reading is within the normal range, an incoming pressure check is not necessary. A too high or too low pressure reading warrants an inlet (incoming) gas pressure check.

TO CHECK THE INLET PRESSURE:

1. Loosen Inlet pressure tap screw [D] by turning screw counter-clockwise.
2. Attach manometer using a 5/16" I.D. hose [E].
3. Light the pilot.
4. Turn the black control knob [A] to the 'on' position. (burner should not come on) and note manometer reading.
5. Turn the pilot to the 'off' position.
6. Disconnect hose and tighten screw (clockwise). Screw should be snug, do not over tighten.
7. Relight pilot and turn the control knob [A] to the 'on' position. Attach manometer to the inlet pressure tap to verify that it is completely sealed. Manometer should read no pressure.

NOTE: If Inlet pressure reading is too high or too low, contact the gas company. Only a qualified gas service technician should adjust the incoming gas pressure.



I) MAINTENANCE REQUIREMENTS

1. The appliance should be inspected at least once a year by a professional service person.

NOTE: INSTALLATION AND REPAIR SHOULD BE DONE BY A QUALIFIED SERVICE PERSON. THE APPLIANCE AND IT'S CHIMNEY SYSTEM SHOULD BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BY A QUALIFIED SERVICE PERSON. MORE FREQUENT CLEANING MAY BE REQUIRED DUE TO EXCESSIVE LINT FROM CARPETING ETC. IT IS IMPERATIVE THAT CONTROL COMPARTMENTS, BURNERS AND CIRCULATION AIR PASSAGEWAYS OF THE APPLIANCE BE KEPT CLEAN.

2. The compartment below the firebox (behind the lower grill) must be cleaned at least once a year, more frequent cleaning may be required due to excessive lint from carpeting, or other fibrous materials. It is imperative that the burner be cleaned once a year.

3. Annual cleaning of the burner is required. The burner may be removed for easier access. See item "D" - Regulator Board Installation.

4. Visually check the pilot light and burner when they are burning. See Figure 8. The flames should be steady, not lifting or floating.

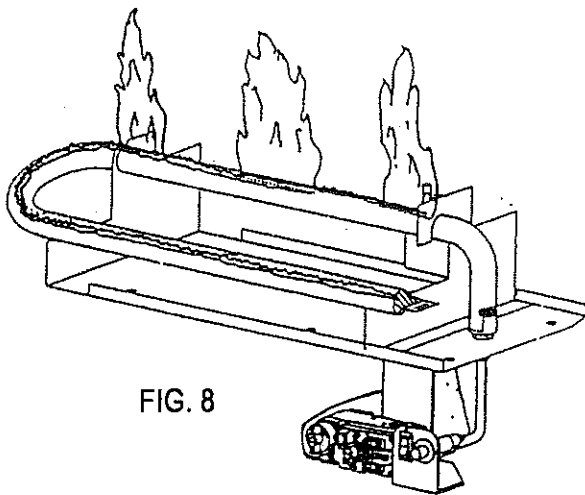
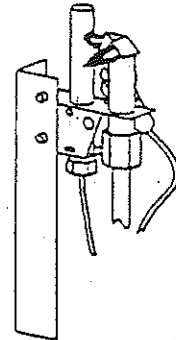


FIG. 8

ORIFICE
#30 NAT GAS
#47 LP GAS



NOTE: ANY SAFETY GUARD REMOVED FOR SERVICING AN APPLIANCE MUST BE REPLACED PRIOR TO OPERATION OF THE APPLIANCE.

CAUTION: Keep the appliance area clear of combustible materials, such as gasoline and other flammable vapors and liquids.

J) WOOD CONVERSION

Your unit can be converted back to a woodburning fireplace by the use of the following instructions.

1. Disconnect and cap off the gas line.
2. Remove the millivolt board by reversing the steps in item C, page 5.
3. Place a piece of 10 gauge metal, large enough to cover the cut-out and the four, 1/4" holes.
4. Remove the insulation from the air intake.
5. Use mason sand to smooth and level the bottom.
6. Replace the firebrick, and the sides, back, and bottom.
7. Remove metal plate covering chimney top, if used.

K) TROUBLE SHOOTING GUIDE

NOTE: The regulator board includes the following items: regulator, generator, pilot, piezo, electrode, rocker switch, burner, orifice and orifice holder. If any of these items are defective, replacement of the entire board is easier and would not void the warranty. Please contact your dealer if this becomes necessary.

The gas line running to the appliance may need to be purged of air before ignition will occur. The time required for this is in direct relationship to the length of the gas line run. Normally this can be done by holding in the "pilot" button for several minutes while pressing the piezo button every few seconds.

1. If the unit fails to ignite a qualified service person should check the units installation.
2. It is imperative that the control compartment, burner and circulation air passageways of the unit be kept clean. This is necessary to provide adequate combustion and ventilation air.
3. All of the working parts of this unit can be removed at one time. Before removing regulator board, check for loose wires.

| <i>PROBLEM</i> | <i>CAUSE</i> | <i>SOLUTION</i> |
|----------------------|---|---|
| Pilot won't light | Gas shut off | Turn gas on |
| | Gas line not bled out | Hold valve knob in long enough to bleed out line. |
| | Not holding regulator valve in long enough | Hold in longer |
| Pilot won't stay lit | Not holding pilot button in long enough | Hold button in long enough to heat generator |
| | Generator wires loose at regulator terminals | Reposition wire and tighten screws. See Fig. 9 for wiring instructions. |
| | Generator wire grounded out due to pinching of wire | Nuts on regulator board may need loosening to remove pinched wire. |

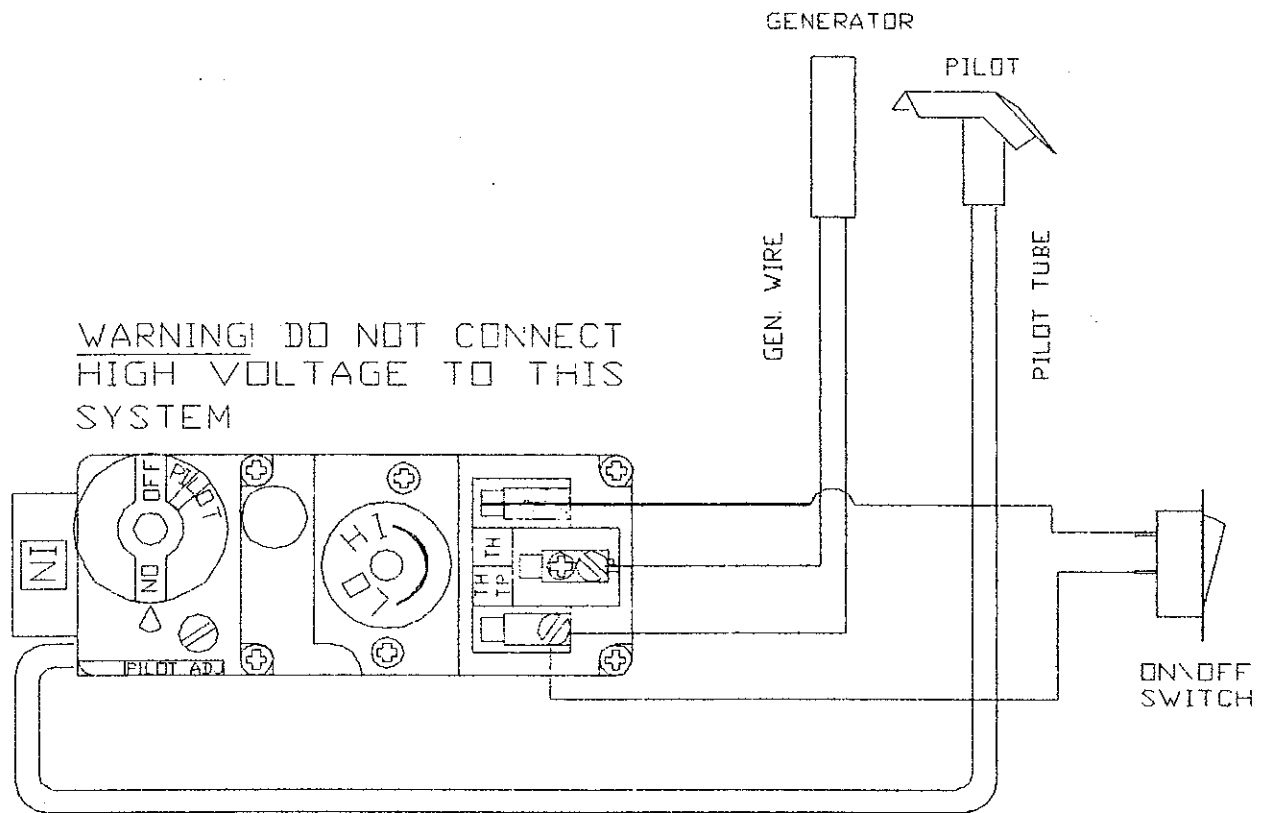


FIG. 9
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| <i>PROBLEM</i> | <i>CAUSE</i> | <i>SOLUTION</i> |
|---|---|---|
| No spark when piezo button is depressed | The nut which holds the piezo in place is loose. | Tighten nut. |
| | Wire on back of piezo button is loose or off. | Put wire back in place. |
| | Wire from piezo to electrode is loose at electrode. | Reconnect wire. |
| | Electrode moved out of position. | Realign electrode with 1/8" space between it and pilot. |
| Burner won't light | Pilot not lit. | Relight pilot. |
| | Regulator valve not turned on. | Turn valve to "on". |
| | Rocker switch not turned. | Press bottom of switch exposing the "Red" or "on" indicator. |
| | Rocker switch wire not connected. | Check wiring diagram Fig. 9 and ensure that all wires are secure. |

REPLACEMENT PARTS LIST

The following replacement parts are available through your local Kozy Heat dealer. Please contact them for availability and pricing.

| <i>Description</i> | <i>Item No</i> |
|------------------------------------|----------------|
| <i>Piezo Ignitor</i> | <i>700032</i> |
| <i>On/Off Switch</i> | <i>700033</i> |
| <i>Gas Valve</i> | <i>700034</i> |
| <i>Burner Tube</i> | <i>700100</i> |
| <i>Millivolt Generator</i> | <i>700036</i> |
| <i>Pilot Assembly</i> | <i>700037</i> |
| <i>Adj. Hi-Lo Regulator - Nat.</i> | <i>700039</i> |
| <i>Adj. Hi-Lo Regulator - LP</i> | <i>700040</i> |
| <i>6 pc fiber log set w/bark</i> | <i>545500</i> |
| <i>Gas line flex tube</i> | <i>700213</i> |
| <i>Manual Shut-off valve</i> | <i>700203</i> |
| <i>KLS Extension Kit</i> | <i>954-51</i> |

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