

GRAND CANYON GAS LOGS

Installation & Owner's Manual

HIGH CAPACITY MILLIVOLT MANUAL

For Natural or Propane Gas

MODELS:

HCMVQMKN

HCMVQMKLP



Features:

- Standing Pilot System
 - Remote Optional
 - Wall Switch Optional
- **Burner capability**
 - 2 Burner - 2BRNST
 - 3 Burner - 3BRNST
 - Kiva • Glass
- Jumbo/Jumbo Slim/Jumbo ST

⚠ WARNING

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

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.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

INSTALLER: Leave this manual with appliance. **CONSUMER:** Retain this manual for future reference.

Grand Canyon Gas Logs burner system is to be installed only in a solid-fuel-burning fireplace with a working flue constructed of noncombustible material. Solid fuels shall not be burned in a fireplace where the unit is installed. The installation, including provisions for combustion, ventilation air, and required minimum permanent vent opening, must conform with the National Fuel Gas Code (ANSI Z223.1/NFPA 54) and applicable local building codes. In Canada, the installation must conform with the Natural Gas and Propane Storage and Handling Installation Code (CSA-B-149.1). A damper stop clamp is included to maintain the minimum permanent vent opening and to prevent full closure of the damper blade. **The chimney damper must be fixed fully opened when burning the unit. The burner system is designed to burn with yellow flames; thus, adequate ventilation is absolutely necessary. If any of these parameters are not met, the warranty could be voided.**



We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute (NFI) as NFI Gas Specialists.

Grand Canyon Gas Logs

3515 East Atlanta Avenue, Phoenix, Arizona 85040

602-344-4217 • grandcanyonlogs.com

TABLE OF CONTENTS

Specifications 1

Important Information 2

Bill of Materials - Parts List 3

Wire Diagram - Millivolt..... 4

Pre-Installation..... 5

Installation 6

L.P. Gas Applications..... 8

Procedure for Lighting or Relighting 9

Service Instructions 10

Troubleshooting 12

Warranty 13

NOTE: Changes may change without notice, Changes will be shown on updated versions.

SPECIFICATIONS

Refer to the burner owner’s manual for minimum firebox dimensions.

MAX BTU OUTPUT

GAS PRESSURE SPECIFICATIONS			
NATURAL GAS		PROPANE GAS	
Outlet pressure reading:	Typical 3.5" w.c	Outlet pressure reading:	Typical 10.0" w.c
Inlet pressure reading	Max. 14" w.c Min. 5" w.c	Inlet pressure reading	Max. 14" w.c Min. 11" w.c

Model	BTUs	
	N.G.	L.P.
HCMVQM	370,000	560,000

IMPORTANT INFORMATION

CHECK TO BE SURE THAT THE PROPER FUEL GAS IS BEING USED WITH THIS CONTROL SYSTEM.

The installation, including provisions for combustion and ventilation air, must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code (ANSI Z223.1/NFPA 54).

This component and its individual shutoff valve must be disconnected from the gas-supply piping system when testing at pressures that exceed 1/2 psig. This is accomplished by closing the gas-supply line valve.

A fireplace screen must be in place when the gas burner system is in operation.

Unless other provisions for combustion air are provided, the screen shall have an opening(s) for introduction of combustion air.

WHEN GLASS FIREPLACE ENCLOSURES (DOORS) ARE USED, OPERATE THE BURNER SYSTEM WITH THE GLASS DOORS FULLY OPEN; BOTH SIDES IF THE FIREPLACE IS A SEE-THROUGH TYPE.

This appliance may be installed in an aftermarket, permanently located, manufactured (mobile) home where not prohibited by local codes. Installation of appliances designed for manufactured homes or mobile homes must conform with Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 in the U.S.; or with CAN/CSA Z240 MH in Canada; or with ANSI/NCSBCS A225.1/NFPA 501A, Manufactured Home Installations Standard when such as standard is not applicable.

Do not use this appliance if any part has been underwater. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been underwater.

TO PREVENT VALVE DAMAGE AND FAILURE:

IT IS CRITICAL THAT THE HEAT SHIELD BE PLACED CORRECTLY OVER THE VALVE..

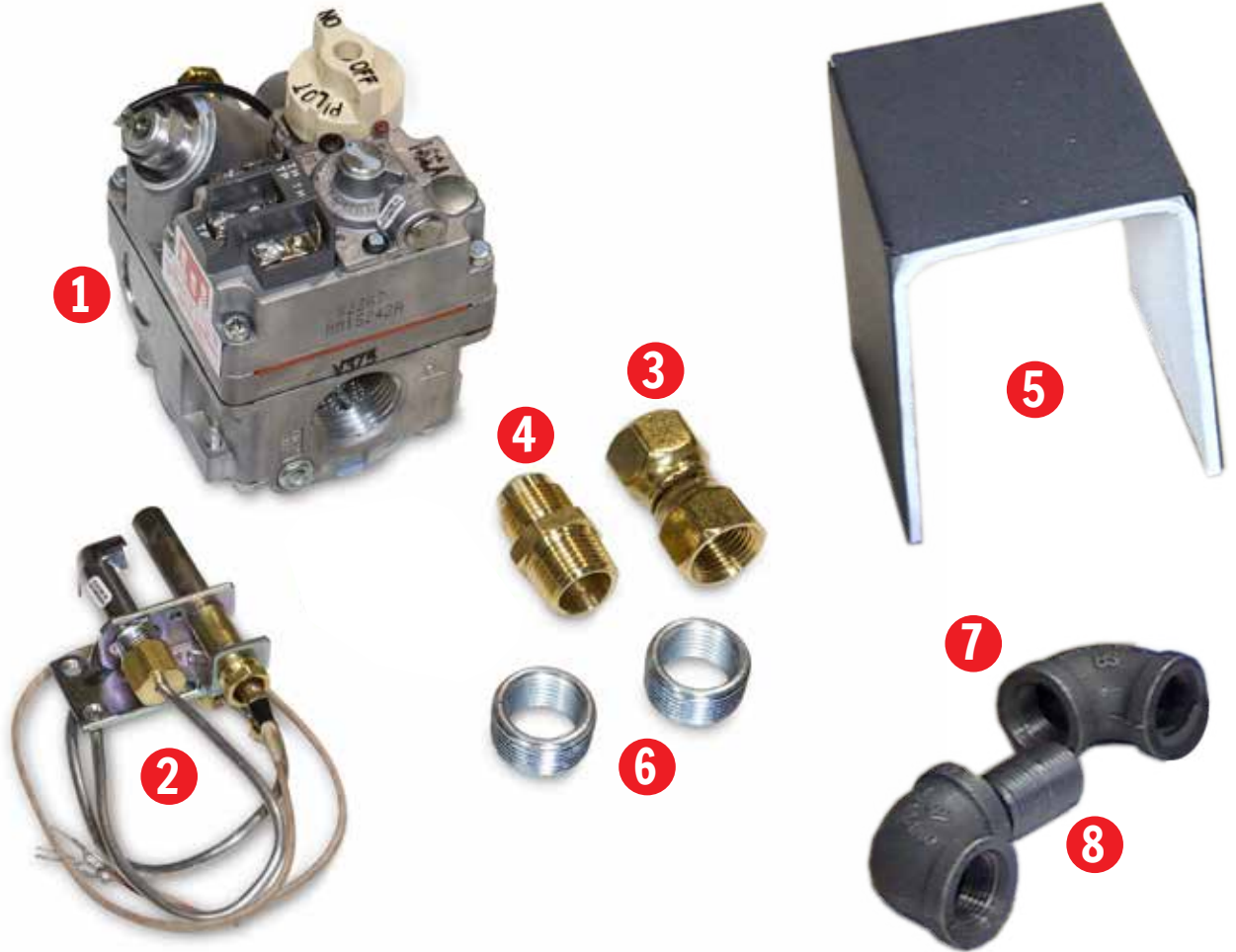
KEEP LAVA, VERMICULITE, EMBERS, FIRE GLASS AND ALL FOREIGN OBJECTS AWAY FROM THE PILOT ASSEMBLY, VALVE ASSEMBLY, AND HEAT SHIELD DURING MEDIA PLACEMENT AND AT ALL TIMES



CAUTION

THIS DEVICE SHOULD BE INSTALLED BY A QUALIFIED SERVICE TECHNICIAN WITH DUE REGARD FOR SAFETY AS IMPROPER INSTALLATION COULD RESULT IN A HAZARDOUS CONDITION.

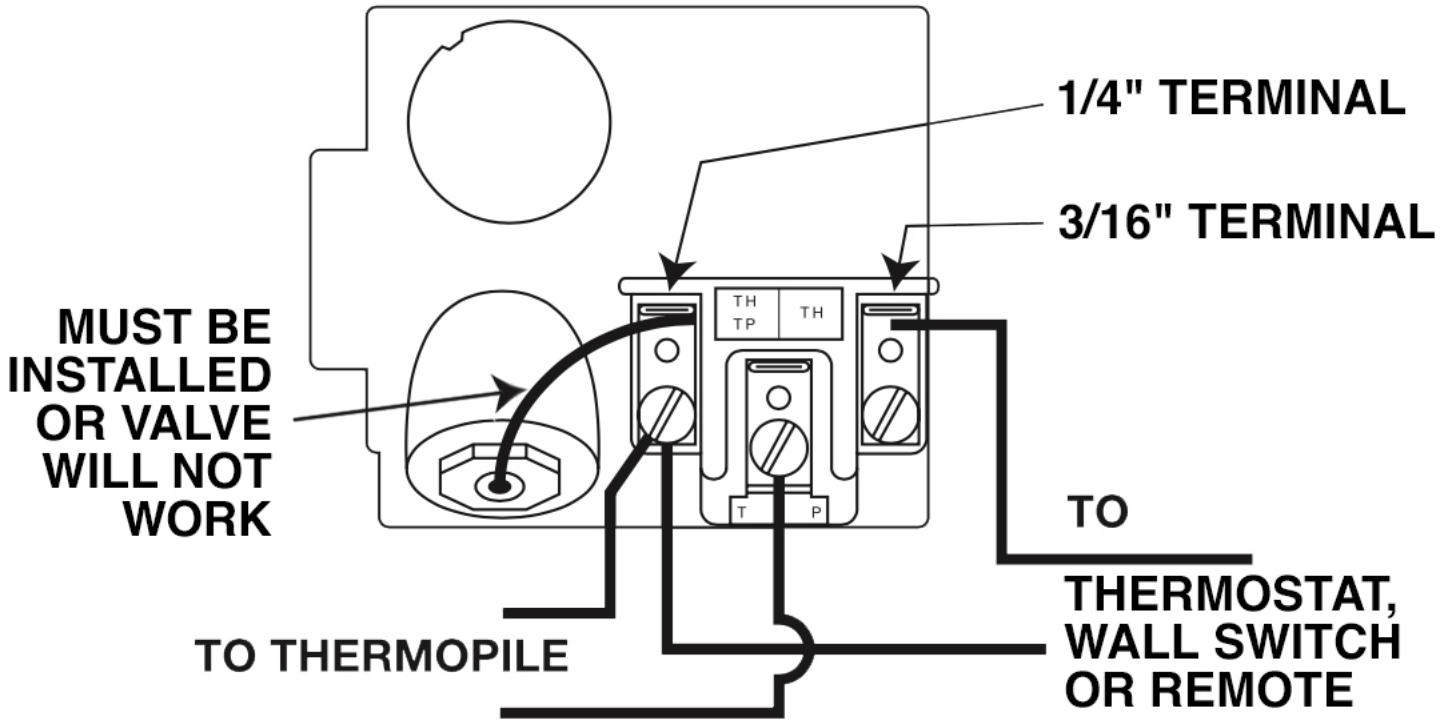
BILL OF MATERIALS



#	Model #	Description	Qty
1	700-506	Millivolt Valve	(1)
2	MV-PILOT-18	18" Millivolt Pilot Assembly (NG version)	(1)
2A	MV-PILOT-18P	18" Millivolt Pilot Assembly (LP version)	(1)
3	US-4-8	1/2" x 1/2" Swivel Nut Union	(1)
4	46-88	Straight Connector 1/2" OD x 1/2" FIB	(2)
5	Heat Shield - HC	Millivolt Heat Shield	(1)
6	Reducer - 3/2	3/4" to 1/2" Reducer	(2)
7	B5309-8	90° Elbow 1/2"	(2)
8	113BS-D	Schedule 40 1/2" MIP Closed	(1)
9	1751-016	700 Series LP Conversion Kit (LP Model only)	(1)

WIRE DIAGRAM - MILLIVOLT

Wire Size	Wire Length	Wire Size	Wire Length
14 GA.	100 FT.	20 GA.	25 FT.
16 GA.	64 FT.	22 GA.	16 FT.
18 GA.	40 FT.		



STEP BY STEP PRE-INSTALLATION

This Millivolt Control must be installed by a qualified professional service technician. Instructions must be followed carefully when installing to ensure proper performance.

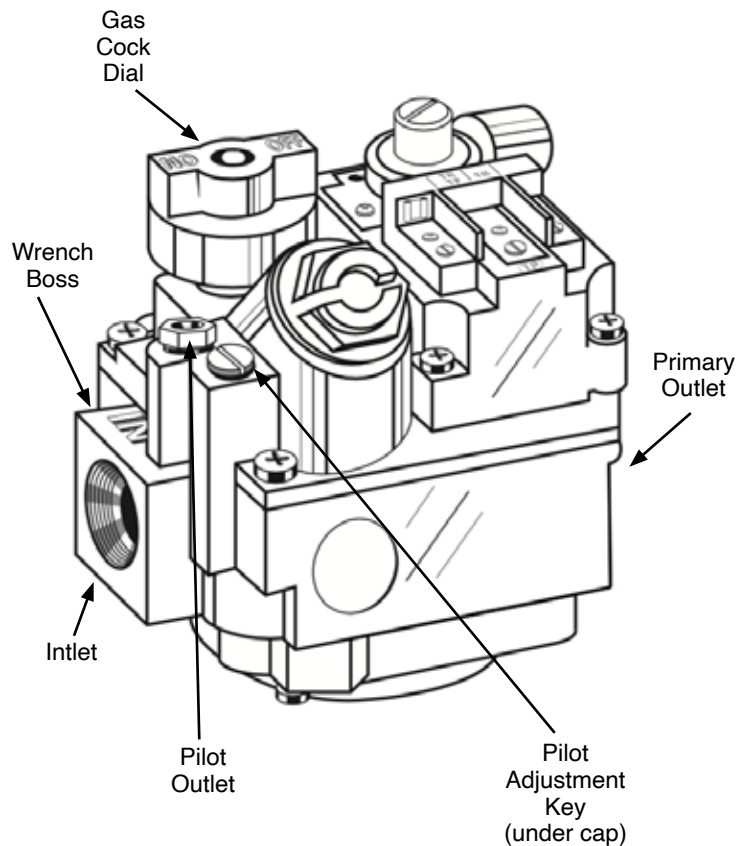
These instructions must be used as a supplement to the instructions supplied with the Grand Canyon Gas Logs burner system. Follow the burner system instructions and make adjustments as appropriate for the addition of a millivolt system. Use gas pipe sealing compound that is resistant to all gases (or Teflon tape) and apply to all male pipe connections. DO NOT apply pipe sealing compound to any flare connections. Make sure that all connections are tight and leak tested.

This Millivolt control system must be installed by a qualified gas professional. These instructions MUST be followed to ensure proper performance and safety. Failure to do so could result in serious injury or death.

Millivolt valve system is shipped pre-assembled with fittings and heat shields already attached. For systems ordered "Assembled" the valve system is pre-assembled and tested at the factory before shipping. Perform the installation with extreme care ensuring not to damage the valve or pilot assembly or other connections. It is also recommended that the valve assembly is performed outside of the fireplace.

Pre-Installation –

For assembly of control system to an existing gas log system, ensure that all the media has been removed and the burner is clear of all dust and debris. Check to ensure that the valve system and burner are labeled for the gas type supplied to the fireplace (Natural Gas or Propane). Also check to ensure that the proper gas pressure is supplied to appliance (Minimum 5" W.C Natural Gas, Minimum 10" W.C Propane).



1. Check replacement valve for multiple outlets (side outlets). If it has them, be sure all unused outlets are plugged using the socket plugs provided.
2. Pipe or tubing must be clean and free of scale and dirt.
3. Make sure gas piping is pressure tested before control is connected. High pressure can damage control causing a hazardous condition.

Do not subject control to more than 1/2 psi, (14" W.C.) inlet pressure.

4. If it is not already installed, a drip leg (sediment trap) must be added to the gas supply line to control. (See figure to the right.) All piping must comply with local codes and ordinances and with National Fuel Gas Code (ANSI Z223.1/NFPA, No. 54).
5. Using pipe thread compound or tape (suitable for gas), apply a small amount on the male pipe threads.

PRE-INSTALLATION

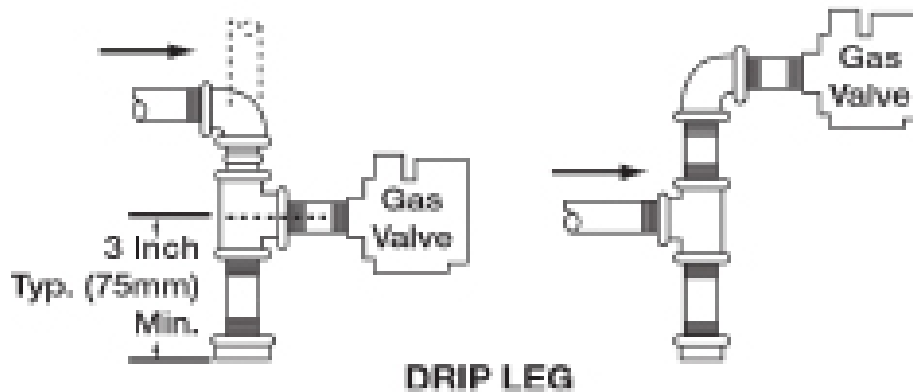
Leave the first two threads clean.

Never use compound on female threads as it might be pushed into the control body.

6. The gas valve is multi position and can be mounted in any position (except upside down) without effecting its operation.

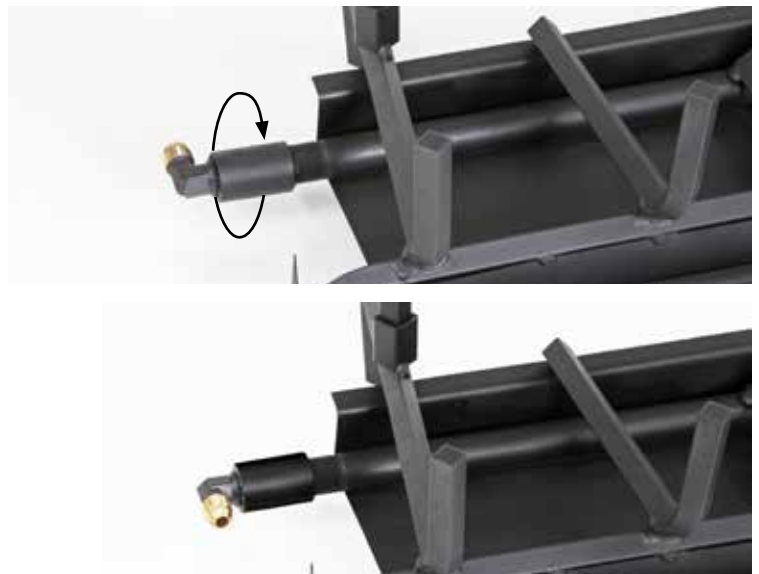
7. Install gas valve so gas flow conforms with the inlet and outlet of the control.

8. DO NOT insert any object other than suitable pipe or tubing in the inlet or outlet of this control. Internal damage may occur and result in a hazardous condition. A backup wrench should only be used on the inlet wrench boss provided for this purpose, never on body of the control, as this could distort the casting. NOTE: Do not over tighten any pipe connections, as this could crack the valve body. A valve with a cracked valve body will not be warrantied.



INSTALLATION

Remove all the burner components from the burner kit and the valve control system parts from the boxes. Locate the gas inlet on the left side of the burner. Using a pipe wrench, rotate the gas inlet 180* degrees so that the inlet is facing the front of the burner (this is for ALL 2-Burners, Glass Burners, Kiva Burners, front view and see through). For 3-Burners & Jumbo/Jumbo Slimline Burners (front view and see through) rotate the gas inlet 225* degrees so that the gas inlet to facing the front of the burner pointing to the ground.



INSTALLATION

Locate the silver gas control (700-506) as well as the 2 48-88 (1/2" MIP x 1/2" Flare Straight), 2 B5309-8 (90 Degree Elbow 1/2") and the 2 113BS-D (Schedule 40 1/2" MIP Closed) Fittings. Review Fig. 1. Using proper pipe thread compound on all non-flare connections, install the 48-88 into the "IN" section of the valve and wrench until fitting is tight. With the "IN" of the valve pointed away from you, install one of the 113BS-D fittings into the "OUT" section of the valve. Install one of the B5309-8 onto the 113BS-D installed on the valve and tighten down, making sure the open end of the fitting is facing to the right side of the valve. Install the other 113BS-D into the open end of the B5309-8, then install the other B5309-8 and wrench down until tight, making sure the open end is facing away from you. Then install the other 48-88 into the B5309-8 and wrench until tight. For ALL 2- Burners, Glass Burners, Kiva Burners (front view and see through), the 48-88 should point back towards the "IN" of the valve. Fig. 1. For 3-Burners and Jumbo/Jumbo Slimline Burners (front view and see through), the 48-88 should be pointing up at a 45-degree angle. Fig. 2.

Locate the US-4-8 (1/2" x 1/2" flared swivel nut union) fitting. With an open-ended or crescent wrench, connect one end of the US-4-8 to the 48-88 on the valve and the other side to the gas inlet on the burner and wrench both connections tight. See Fig. 3.

Locate the pilot mounting bracket. This can be found on the back of the 2-Burner & Kiva, side of the 3-Burner and Jumbo Series and the pan of the glass burner. Screw in using the location holes in the pilot bracket with self-tapping or #10-32 machine screws. See Fig. 4, make sure that the pilot hood has (1) flame pointing towards the thermopile and the other flame towards the burner.



FIG 1



FIG 2

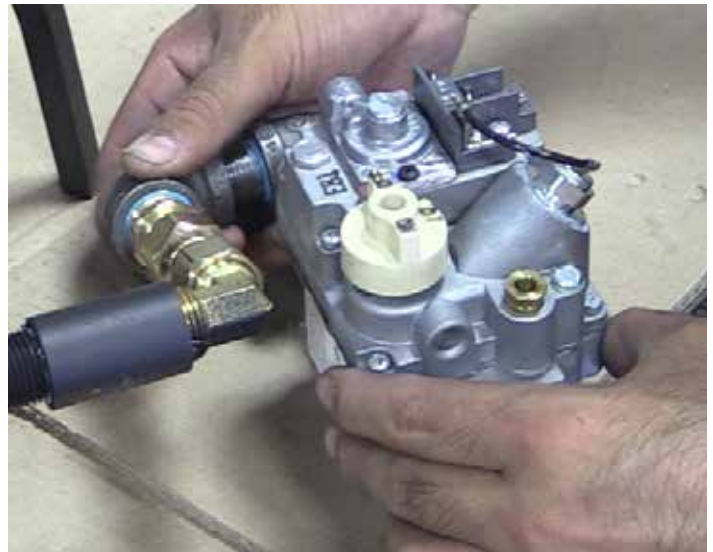


FIG 3



FIG 4

INSTALLATION

Coil the pilot tubing using proper bending techniques and insert the ¼" flare end into the "PILOT" connection on the valve. Wrench until tight. Fig. 5.



FIG 5

Coil the Thermopile lead and connect the terminals to the valve. Color sequence does not matter, connect (1) lead to the TP and (1) lead to the TH/TP. Fig. 6.



FIG 6

For remote or wall switch installation, connect the ends of the terminal to the TH and the TH/TP connection on the valve. Fig. 7.



FIG 7



L.P. GAS APPLICATIONS WARNING

To avoid possible injury, fire and explosion, please read and follow these precautions and all instructions on appliance before lighting the pilot. L.P. (Propane) gas is heavier than air and will remain at floor level if there is a leak. Before lighting, sniff at **floor level**. **If you smell gas**, follow these rules:

1. Get all people out of building.
2. **DO NOT** light matches. **DO NOT** turn electrical lights or switches on or off in area. **DO NOT** use an electric fan to remove gas from area.
3. Shut off gas at L.P. tank outside of building.
4. Telephone gas company and fire department.

Ask instructions. Before hanging up, give your name, address, and phone number.

DO NOT go back into the building. If help is coming, wait for them to arrive.

If L.P. tank runs out of fuel, turn off gas appliance. After L.P. tank is refilled, appliance must be relit according to manufacturer's instructions. If the gas control has been exposed to **WATER** in any way, **DO NOT** try to use it. It must be replaced. **DO NOT** attempt repair on gas valve or appliance.

Tampering is **DANGEROUS** and voids all warranties.

FOR YOUR SAFETY - LIGHTING INSTRUCTIONS

“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 lit by hand.
- 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:

- 1. Do not try to light any appliance.
- 2. Do not touch any electrical switch; do not use any phone in your building
- 3. Immediately call your gas supplier from a neighbor’s phone. Follow the gas supplier’s instructions.

- 4. If you cannot reach your gas supplier, call the fire department.
- 5. 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
- 6. 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 underwater.

LIGHTING INSTRUCTIONS FOR MILLIVOLT VALVE

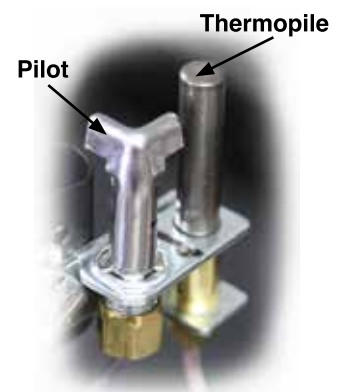
- 1. STOP! Read the safety information above on this label.
- 2. Push in gas control knob slightly and turn clockwise to “OFF”



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 smell gas, STOP! Follow “B” in the safety information above. If you don’t smell gas, go to next step.
- 4. Find pilot – follow metal tube from the gas control behind the burner.

- 5. Turn knob on gas control-clockwise to “PILOT”
- 6. Push in control knob all the way and hold in immediately light the pilot with a match. Continue to hold the control knob in for about one minute after the pilot is lit.



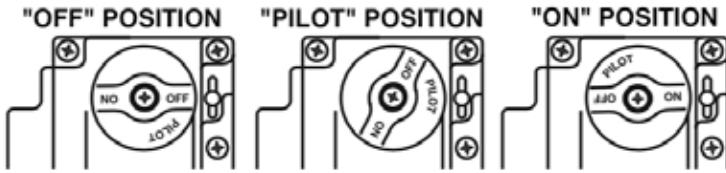
Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 3-7

- 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”.

TO TURN OFF GAS TO APPLIANCE

1. Turn knob clockwise from “ON” position to the “PILOT” position. Push in the gas control knob slightly and turn clockwise to “OFF”. Do not force knob.

PROCEDURE FOR LIGHTING OR RELIGHTING



Dials must be operated by hand. DO NOT use pliers, wrenches or other tools to turn dials.

The Gas Cock Dial has a dual function:

- A) Complete control of gas to pilot and main burner.
- B) When in pilot position, it is the reset mechanism for the automatic pilot.

The Gas Cock Dial cannot be turned to "OFF" position without first depressing dial in "PILOT" position and then rotating to "OFF".

1. Depress and turn Gas Cock Dial to "OFF" position.
2. Turn temperature dial (hydraulic models) or wall thermostat (24V and millivolt models) to "OFF" or lowest setting.
3. Wait at least 5 minutes (10 minutes for L.P. gas) to allow gas which may have accumulated in burner compartment to escape.
4. Turn Gas Cock Dial to the "PILOT" position.
5. Hold match at pilot burner. **CAUTION:** If pilot lights without depressing Gas Cock Dial replace control. Depress and hold Gas Cock Dial while lighting pilot burner. Allow pilot to burn approximately one half minute. (1-1/2 minutes for millivolt models) before releasing Gas Cock Dial. If pilot does not remain lighted, repeat operation allowing longer period before releasing Gas Cock Dial. (Adjust pilot, if necessary, as noted under "Pilot Burner Adjustment.") The thermo- couple or thermopile may also be defective and should be checked out. (See SERVICE INSTRUCTIONS.)

LEAK TEST

Test for gas leaks after valve installation with main burner on. Use a rich soapy water, and paint all piping and tubing joints liberally. Bubbles are indicative of a leak.

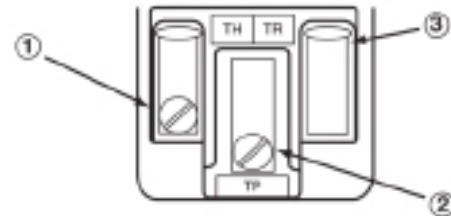
SERVICE INSTRUCTIONS

CAUTION: If control has been exposed to water in any way, it must be replaced. If gas valve fails to shut off, do not turn off electrical power. Turn off gas supply allowing fan or circulating pump (if so equipped) to continue running until system has cooled. Replace control.

Millivolt System

The millivolt system and individual components may be checked with a millivolt meter having a 0-1000 MV range. Before checking system, be certain wall thermostat lead wire does not exceed length recommended in Wiring Section Table, and all connections are clean and tight.

Conduct each check shown in chart below by connecting meter test leads to terminals as indicated. All readings are closed circuit.



COMPONENT CHECK	CONNECT METER TEST LEADS TO TERMINALS	WALL THERMOSTAT CONTACTS SHOULD BE	METER READING SHOULD BE	CHECK RESULT ON PAGE 4
Valve Operator System	2 & 3	Closed	Greater Than 100 MV	A
Wall Thermostat	1 & 3	Closed	Less Than 80 MV	C
Thermopile and Magnet	1 & 2	Open	Greater Than 325 MV	B

A. TEST RESULTS

If the reading is more than 100 millivolts and the automatic valve does not come on, replace the valve operator. If the closed circuit reading is less than 100 millivolts, determine the cause by proceeding with steps "B" and "C".

B. TEST RESULTS

If "B" reading is less 325 MV, clean and tighten all electrical connections and adjust pilot if necessary to increase millivolt output. If unable to adjust to least the specified minimum, change the thermopile. When proper thermopile output is obtained, the magnet may then be checked. With pilot operation, allow meter reading at dropout point of magnet. If magnet remains locked up to a reading of 120 MV or less, the magnet is good.

C. TEST RESULTS

If "C" reading is more than that specified for that specified for the system being checked, clean and tighten thermostat leads and connections, shorten leads wires if possible or use heavier gauge wire. Rapidly cycle thermostat to clean contacts, or change the thermostat.

SERVICE INSTRUCTIONS

PILOT BURNER ADJUSTMENT

1. Remove pilot adjustment cap.
2. Adjust pilot key to provide properly sized flame on the thermopile. The flame should cover the upper 3/8" of the tip.
3. Replace pilot adjustment cap.

IMPORTANT: Do not use GAS COCK DIAL to adjust gas output on 7000 models.

PRESSURE REGULATOR ADJUSTMENTS

Adjustment of the pressure regulator is not normally necessary since it is preset at the factory. However, field adjustment may be accomplished as follows:

NOTE: Manometer attachment may be accomplished at pressure tap plug, below control outlet.

Manual and Electric Models

1. Remove regulator adjustment screw cap.
(Top of regulator.)
2. With small flathead screwdriver, rotate adjustment screw "clockwise" to increase, or "counterclockwise" to decrease pressure.
3. Replace regulator adjustment screw cap.

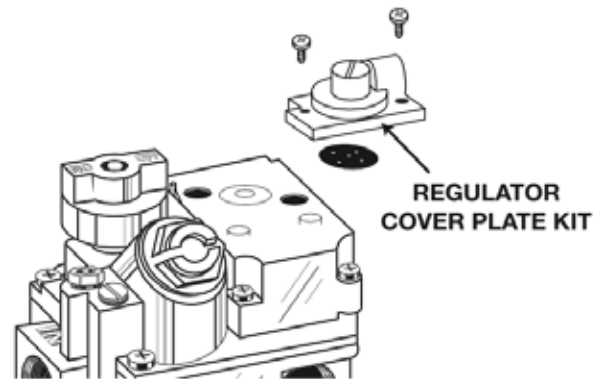
REGULATOR CONVERSION OR REPLACEMENT

CAUTION: Main burner and pilot orifices must be changed when regulator is converted from one type of gas to another.

REGULATOR REPLACEMENT

If it is necessary to change to another gas then the valve operator will need to be changed.

1. Depress and turn gas cock dial to "OFF".
2. Remove two screws, regulator cartridge and gasket.
3. Install new gasket and regulator (this assembly must be positioned properly.) Use new screws supplied with regulator.
4. Relight appliance by following steps 4, 5, and 6 or procedure for lighting and relighting.
5. Test for leaks around the regulator using soap solution with main burner "ON".



TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
1. Pilot will not light	<ul style="list-style-type: none"> a. Obstruction in pilot gas supply or pilot gas-supply line is kinked b. Inadequate gas pressure c. Air in line 	<ul style="list-style-type: none"> a. Clear out obstruction. Replace pilot gas-supply line if kinked b. Have gas pressure checked by installer or gas supplier c. Air should clear; attempt to relight
2. Pilot will not stay lit	<ul style="list-style-type: none"> a. Loose wires b. Low gas pressure c. Faulty thermopile d. Safety magnet wire not connected on TH TP terminal 	<ul style="list-style-type: none"> a. Check all wires are securely in place b. Check gas pressure c. Check MV voltage d. Connect safety magnet wire to TH TP terminal
3. Pilot lights, but main burner will not	<ul style="list-style-type: none"> a. Wire leads are not connected to proper valve terminals b. Defective valve 	<ul style="list-style-type: none"> a. Make sure all wire leads are tight and attached to proper terminals (see wiring diagram section pg 4) b. Check valve using service instructions component check & valve operator system c. Replace valve
4. Burner system not burning properly	<ul style="list-style-type: none"> a. Low flame/uneven flame 	<ul style="list-style-type: none"> a. Check for low gas pressure; should have operating pressures of 5" w.c. for natural gas, 11" w.c. for propane at manifold
5. Burner system shuts down during operation	<ul style="list-style-type: none"> a. Glass doors closed, causing excessive heat buildup b. Thermopile is dirty or damaged c. Heat shield not in place 	<ul style="list-style-type: none"> a. Always run fireplace with doors fully opened b. See INSTALL (page 6-8) c. Clean with brass brush and check for Millivolt dropout. Replace if Millivolt levels drop out.

Periodically inspect the pilot assembly and valve controls and maintain them free of obstruction or debris. If the pilot flame is not blue with possibly yellow tips and does not impinge on the electrodes or if the pilot does not stay lit, contact a qualified professional service technician to service the pilot system.

WARRANTY

Burner:

Grand Canyon Gas Logs burners carry a life time warranty against manufacture defects or breakage as long as the appliance is installed inside and by a professional installer. In the event a defect or breakage occurs, a replacement will be available for pick-up from the dealer at which the burner was originally purchased.

This warranty is limited to original purchaser only. Indoor burners installed outside carry a (1) year warranty.

Electrical and Valves:

Grand Canyon Gas Logs valves, remotes & receivers carry a (2) year warranty against breakage or defects from date of purchase, by original purchaser, and must be installed by a licensed professional installer. This warranty only covers use with Grand Canyon Gas Logs burners and logs. In the event a defect or breakage occurs, a replacement will be available for pick-up from the dealer at which the burner was originally purchased. Batteries are not covered under this warranty.

PRODUCT REGISTRATION FORM - QR code for quick link



DO NOT RETURN TO STORE!



STOP CALL US FIRST

**For immediate help with installation, product information or
if your product arrives damaged, please call our toll free number at:**

1-602-344-4217

(Monday - Friday, 8:00AM - 5:00PM, AZ Mountain Time)

or email us at:

customerservice@grandcanyongaslogs.com

OUR STAFF IS READY TO PROVIDE ASSISTANCE



**Thank you for choosing Grand Canyon Gas Logs,
we appreciate all our customers and hope you have many years of
enjoyment of our products.**

**Take a look at our other products
from our RPG Brands family of companies**



RPG BRANDS FAMILY OF COMPANIES



Copyright © 2022 RPG Brands (Grand Canyon Gas Logs). All rights reserved. Products and specifications subject to change without notice.
The product images shown are for illustration purposes only and may not be an exact representation of the product.

All rights reserved U.S.A.,
08_2022_V1