# INSTALLATION INSTRUCTIONS
# VKMVH(N,P) VALVE KIT

**FOR USE ON VENTED BURNER MODELS: BFL(2124,30)MTN**

**INSTRUCTIONS MUST BE LEFT WITH THE OWNER FOR FUTURE REFERENCE AFTER INSTALLATION.**

**⚠WARNING**

**This valve kit is to be installed be an Empire Comfort Systems Dealer (or other qualified agency[1])* in accordance with the manufacturer's instructions and all codes and requirements of the authority having jurisdiction. Failure to follow instructions could result in serious injury or property damage. The qualified agency performing this work assumes responsibility for this conversion.**

**[1]National Fuel Gas Code Z223.1 (Latest Edition)**

***The term "qualified individual", firm, corporation or company which either in person or through a representative is engaged in and is responsible for (a) the installation of gas piping or (b) the connection, installation repair, or servicing of equipment, who is experienced in such work, familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction.**

## CHECK SAFETY SHUTDOWN PERFORMANCE

**⚠WARNING**

**Perform the safety shutdown test anytime work is done on a gas system to avoid the possibility of fire or explosion with property damage, personal injury or loss of life.**

**TOOLS NEEDED:**

- 3/8" Open-end wrench
- 7/16" Open-end wrench
- 9/16" Open end wrench
- 1/4" Hex driver
- 5/16" hex driver
- Phillips screw driver
- Adjustable wrench

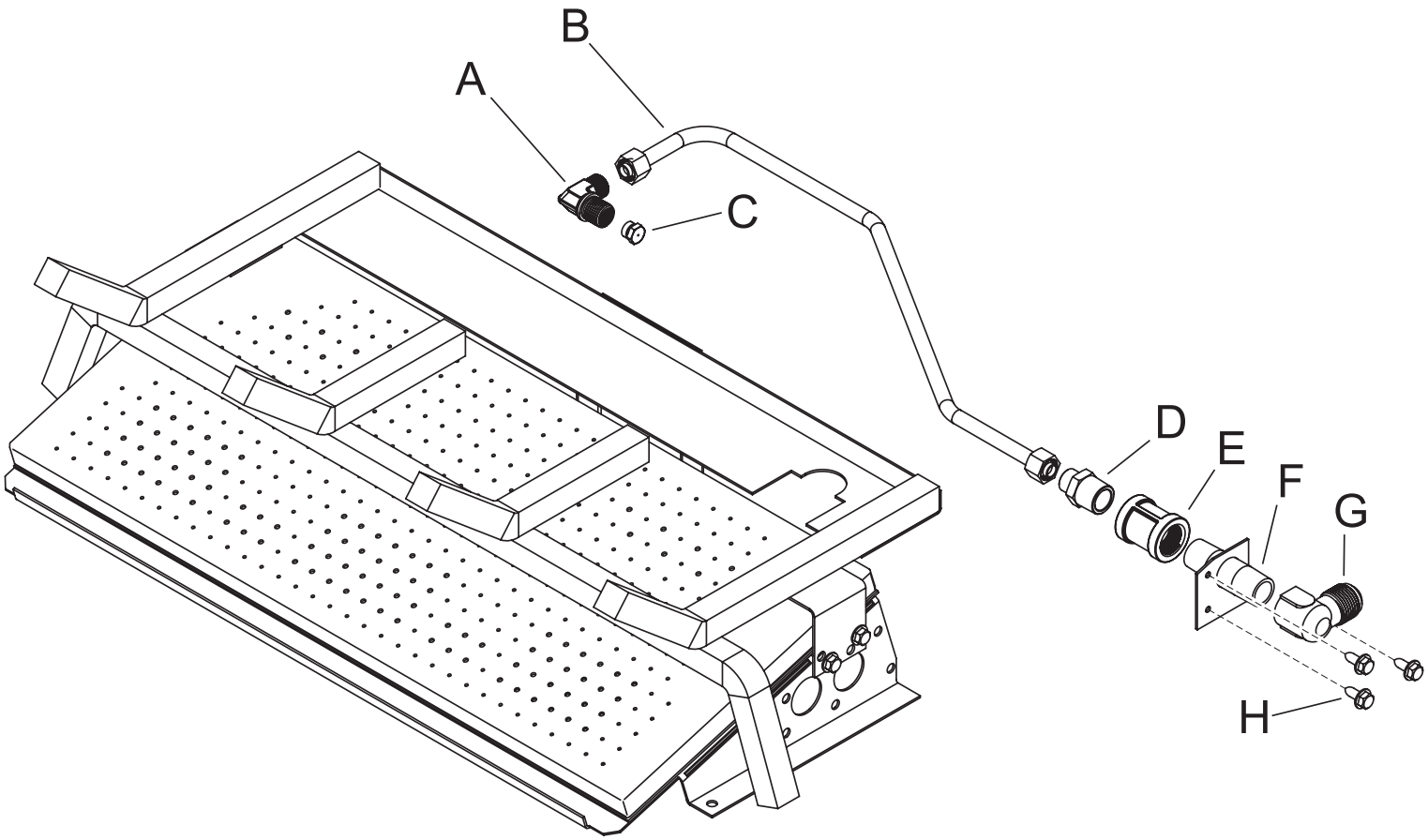



**Figure 1**

| TABLE 1 | | |
|---|---|---|
| **Match-Light Components - Disassembly Diagram (Figure 1)** | | |
| **A** | Orifice Fitting Elbow | **KEEP - WILL BE REUSED** |
| **B** | Match-Light Tube Assembly | **REMOVE AND DISCARD** |
| **C** | Match-Light Orifice | **REMOVE AND DISCARD** |
| **D** | Tube Connector, Brass | **REMOVE AND DISCARD** |
| **E** | 3/8" NPT Union | **REMOVE AND DISCARD** |
| **F** | Nipple Weldment | **REMOVE AND DISCARD** |
| **G** | 1/2" Flare X 3/8" NPT Elbow, Brass | **KEEP - WILL BE REUSED** |
| **H** | #10 Screws | **REMOVE AND DISCARD** |

**REFERENCE FIGURE 1 AND TABLE 1 DURING THE FOLLOWING DISASSEMBLY STEPS:**

1. Remove the logs, fiber heat sink, and rockwool from the burner surface.
2. Disconnect the gas line and remove the burner from the firebox. Move the burner to a suitable work area.
3. Using a 9/16" wrench, remove the Match Light Tube Assembly (B) from the Orifice Fitting Elbow (A) and the Tube Connector (D).
4. Using an adjustable wrench, remove the 1/2" Flare Elbow (G) from the nipple on the side of the burner. Keep this for later.
5. Using a 5/16" hex driver, remove the three #10 screws (H), Nipple Weldment (F), 3/8" NPT Union (E), and Tube Connector (D).
6. Un-screw the Orifice Fitting Elbow (A) from the Venturi Air Shutter. Remove the orifice from the Fitting Elbow. Discard the orifice but KEEP THE FITTING ELBOW FOR LATER.

**BURNER SUPPLY TUBE SELECTION:**

1. Refer to **Figure 2** to determine which size burner you are working with. Select the appropriate tube from the valve kit and discard the other one.

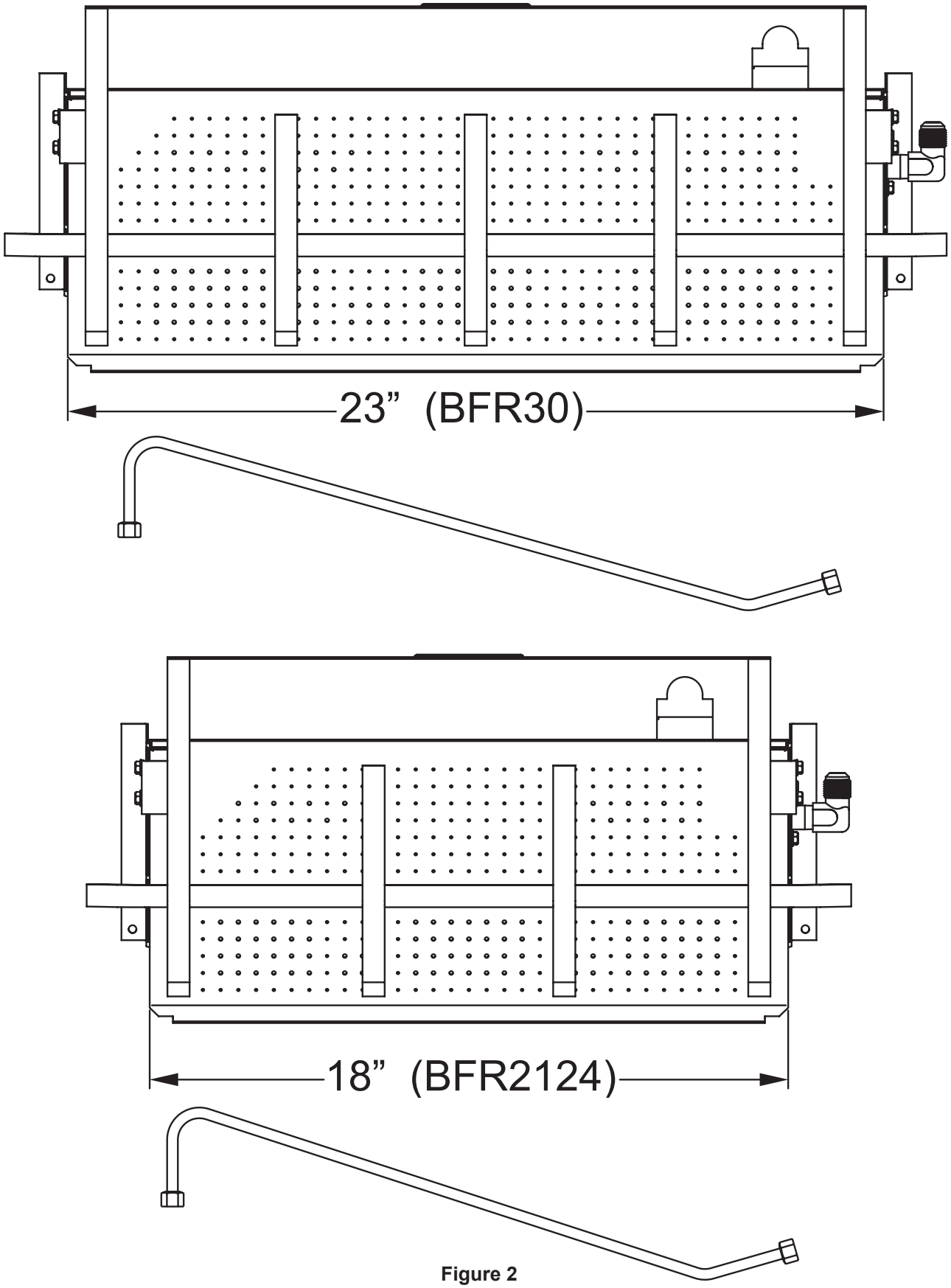



**Figure 2**

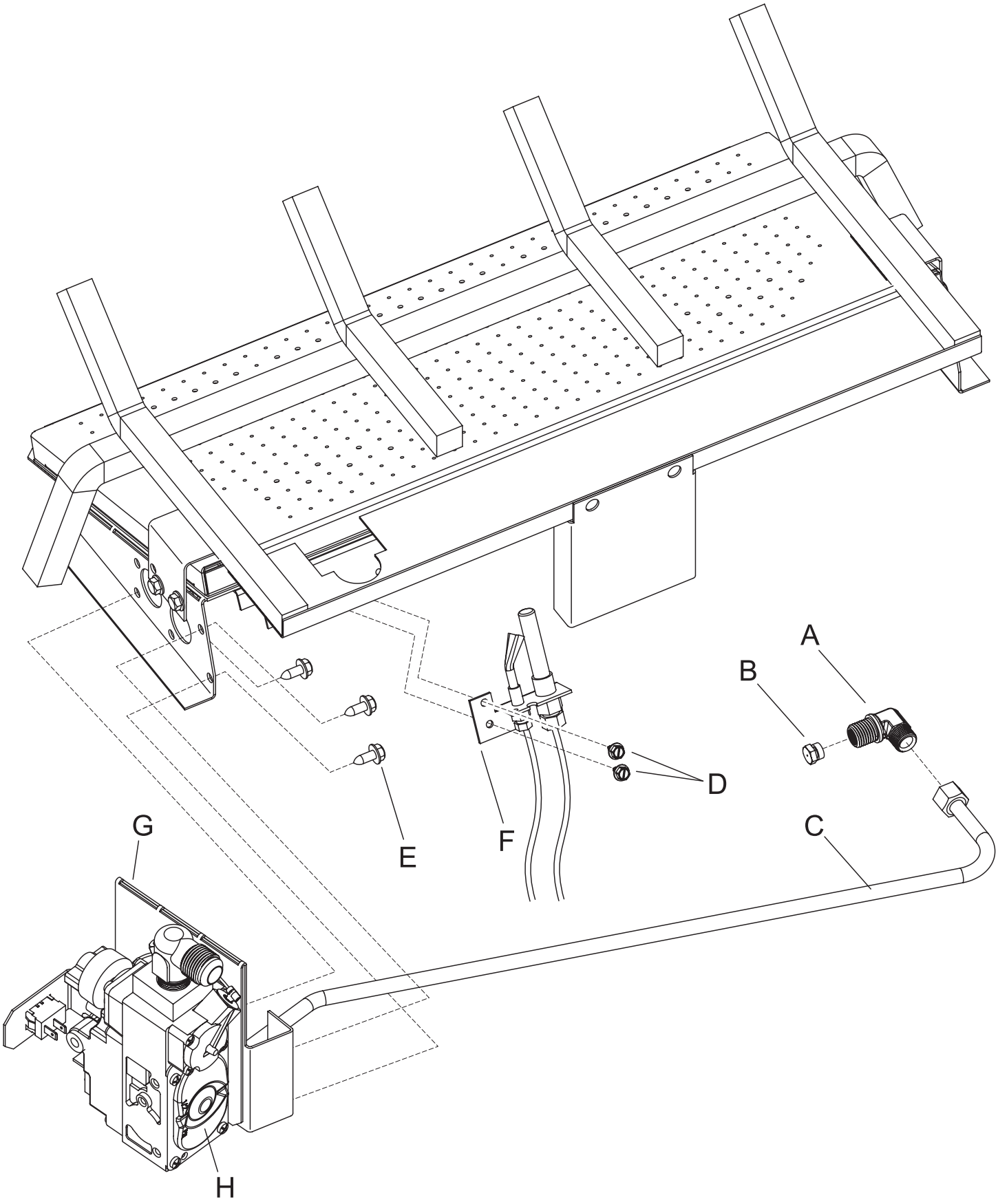



**Figure 3**

| TABLE 2 | | | |
|---|---|---|---|
| **Millivolt Components, Assembly Diagram (Figure 3)** | | | |
| | **Description** | **Part Number** | **Notes** |
| **A** | Orifice Fitting Elbow | | Retained From Match-Light Configuration |
| **B** | Orifice | P310 | Orifice, 2.2mm - 24" LP Burner |
| | | P256 | Orifice, #41 - 30" LP Burner |
| | | P283 | Orifice, #26 - 24" NG Burner |
| | | P325 | Orifice, #12 - 30" NG Burner |
| **C** | Burner Supply Tube Assembly | 38664 | Use Longer Tube For 30" Burner |
| | | 38639 | Use Shorter Tube For 24" Burner |
| **D** | #8 X 3/8" Screws | | |
| **E** | #10 X 1/2" Screws | | |
| **F** | Pilot w/Thermopile | R12052 (NG or LP), Add R120069 Pilot Orifice For LP Only | |
| **G** | Valve Bracket | 38632 | |
| **H** | Millivolt Valve | R12636(NG) R10408(LP) | |

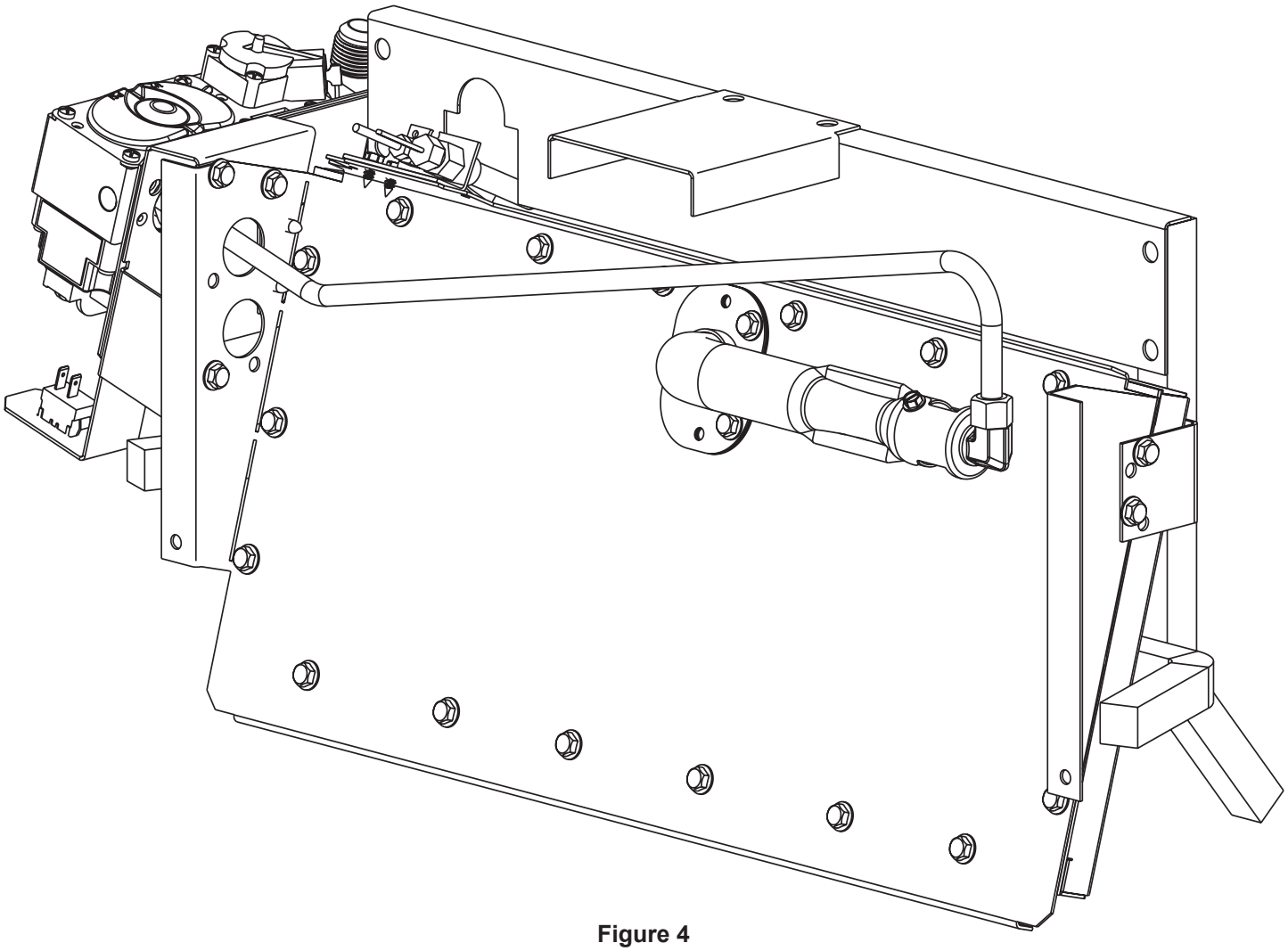


**Figure 4**

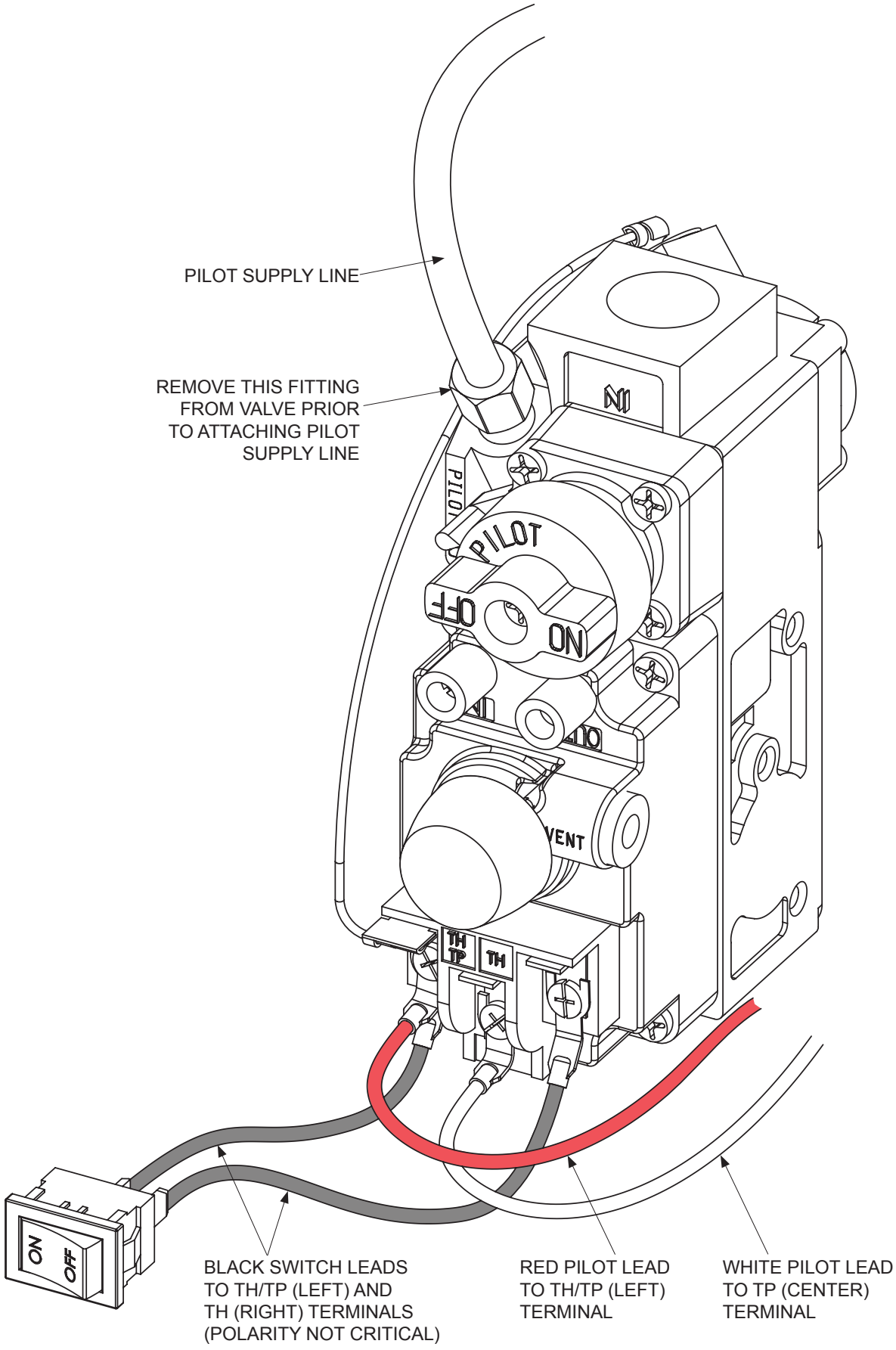

PILOT SUPPLY LINE
REMOVE THIS FITTING FROM VALVE PRIOR TO ATTACHING PILOT SUPPLY LINE
PILOT
OFF
ON
TH/TP
TH
ON
OFF
BLACK SWITCH LEADS TO TH/TP (LEFT) AND TH (RIGHT) TERMINALS (POLARITY NOT CRITICAL)
RED PILOT LEAD TO TH/TP (LEFT) TERMINAL
WHITE PILOT LEAD TO TP (CENTER) TERMINAL

**Figure 5**

**REFERENCE FIGURES 3, 4, 5 AND TABLE 2, DURING THE FOLLOWING ASSEMBLY STEPS:**

1. Select the correct Orifice (B) for your application from **Table 2** and, using a 3/8" wrench, install it into the Orifice Fitting Elbow (A) retained from the disassembly sequence. DO NOT use an incorrect orifice.
2. Install the Orifice Fitting Elbow w/ Orifice back into the Venturi Air Shutter, pointing rearwards.
3. Using a 9/16" wrench, attach the Millivolt Tube Assembly (C) to the MV Valve (H) as shown in **Figure 4.**
4. Feed the Tube Assembly through the front-most hole in the burner leg as shown in **Figure 4.**
5. Attach the Valve Bracket (G) to the burner leg using a 5/16" hex driver and three #10x1/2" Screws (E) as shown in **Figures 3 and 4.**
6. Attach opposite end of Tube Assembly ( C ) to the Orifice Fitting Elbow (A) using a 9/16” wrench.
7. Using a 1/4" hex driver and two #8x3/8" Screws (D), attach the Pilot (F) to the burner base as shown in **Figure 3.**
8. Attach the Pilot Supply Line to the Valve (H) using a 7/16" wrench, (remove brass fitting from valve (H) before attaching Pilot Supply Line). **See Figure 5.**
9. Neatly route Pilot Supply Line so it will not interfere with the Fiber Heat Sink.
10. Remove the toggle switch from the Valve Bracket (G) to gain access to the terminals on the front of the valve.
11. Using a Phillips screw driver, attach the red and white Pilot leads to the valve terminals as shown in **Figure 5.**
12. Using a Phillips screw driver, attach the black switch leads to the valve terminals as shown in **Figure 5.**
13. Re-attach the switch to the Valve Bracket (G).
14. Attach the lighting instruction plate to the burner leg using the included length of chain.
15. Return burner assembly to fireplace.
16. Connect gas line to Brass Flare Elbow on top of the Valve.
17. Compounds used on threaded joints of gas piping shall be resistant to the action of liquefied petroleum gases. The gas lines must be checked for leaks by the installer. Testing for leaks on all exposed connections should be done with leak test solution or a soap solution. After testing is complete, all solution should be cleaned off. On unexposed connections, a pressure test should be made. Never use an exposed flame to check for leaks. Burner must be disconnected from piping at inlet of control valve and pipe capped or plugged for pressure test. Never pressure test with fireplace connected; control valve will sustain damage!
18. Replace rockwool on burner surface. See burner Installation Manual for more information.
19. Reinstall Fiber Heat Sink
20. Reinstall logs according to log instruction manual.
21. Installation is complete.




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If you have a general question about our products, please e-mail us at info@empirecomfort.com.

If you have a service or repair question, please contact your dealer.

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