KIDDE-FENWAL, INC.

400 Main Street Tel: (508) 881-2000
Ashland, MA 01721 Fax: (508) 881-6729

Installation Instructions
Mechanical Gas Shutoff Valve
Kidde-Fenwal Part Numbers 87-100001-001 Through 87-100001-007

This document is an addendum to the following Kidde-Fenwal pre-engineered system instruction manuals:

System Model	Manual P/N	U.L. Reference	Addendum number which this document represents
WHDR-250	219596	EX 3559	1
WHDR-500	219596	EX-3559	1
HDR-25DC	219585	EX 2153	7
HDR-50DC	219586	EX 2153	7

WARNING:
SHUT OFF GAS SUPPLY BEFORE INSTALLING THE FOLLOWING AUXILIARY EQUIPMENT.

The mechanically actuated gas shutoff valve is installed in the gas line (the gas flow direction is indicated on the valve body).

Connection of Gas Shutoff Valve to Control Head

The gas shutoff valve must be installed as described in Steps 1 through 17.

1. A 4" square electrical junction box with 1/2" knock outs and cover **MUST** be installed on the gas valve. Use Kidde-Fenwal hex nut and lockwasher to secure box to gas valve.

2. Remove top center 1/2" knock out from 4" box and install 1/2" conduit connector.

3. Run 1/2" EMT conduit from the control head outlet (on right side of head, see figure 85 in Aqua-Blue manual) to the conduit connector on the top of the gas valve. Use 90° corner pulleys or a "T" pulley for all changes in direction.

4. Ensure that the control head is mounted on a test fixture, with the cover off, and is in the "set" position.

5. Cut a cable length sufficiently long for installation between the control head and the mechanical gas valve.

6. Slide a cable crimp sleeve, P/N 214951, over the end of the cable. Insert the end of the cable back through the cable crimp sleeve to form a loop. Pull the end of the cable to make the loop as small as possible. Loop should protrude slightly from the end of the cable crimp sleeve.

7. Crimp the cable crimp sleeve with the crimping tool, P/N 253538. If necessary, trim the end of the cable so that the cable end protrudes only slightly from the end of the cable crimp sleeve opposite the loop.

8. Insert the loose end of the cable through the larger end of the hole in the actuating cam. Pull the entire length of the cable through the hole. The cable crimp sleeve should rest in the hole.

9. Wrap the cable COUNTERCLOCKWISE around the actuating cam two times. The cable should rest between the hex and the tapered boss of the actuating cam.

WARNING:
THE CABLE MUST BE WRAPPED AROUND THE ACTUATING CAM IN A COUNTERCLOCKWISE DIRECTION. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL PREVENT THE ACTUATING CAM FROM FUNCTIONING WHEN THE CONTROL HEAD IS RELEASED. THIS WILL PREVENT THE PLUNGER FROM OPENING THE CYLINDER VALVE, AND WILL PREVENT THE SYSTEM FROM DISCHARGING.

10. Run the cable through the control head gas valve inlet, the conduit, and into the 4" box connected to gas valve.

11. Be sure the cover plate is off the 4" box attached to the gas valve. Ensure the gas valve is in the closed position. The gas valve plunger stem should be all the way down.

12. Slide loose cable end through notch in top of cable block, and continue through the hole in the bottom of cable block directly beneath the notch (see attached details).

13. Slide cable block to top of 4" box to meet conduit connector and pull all cable slack through. Once **ALL** slack in gas valve line is pulled through cable block, tighten set screw #1 (see attached details).

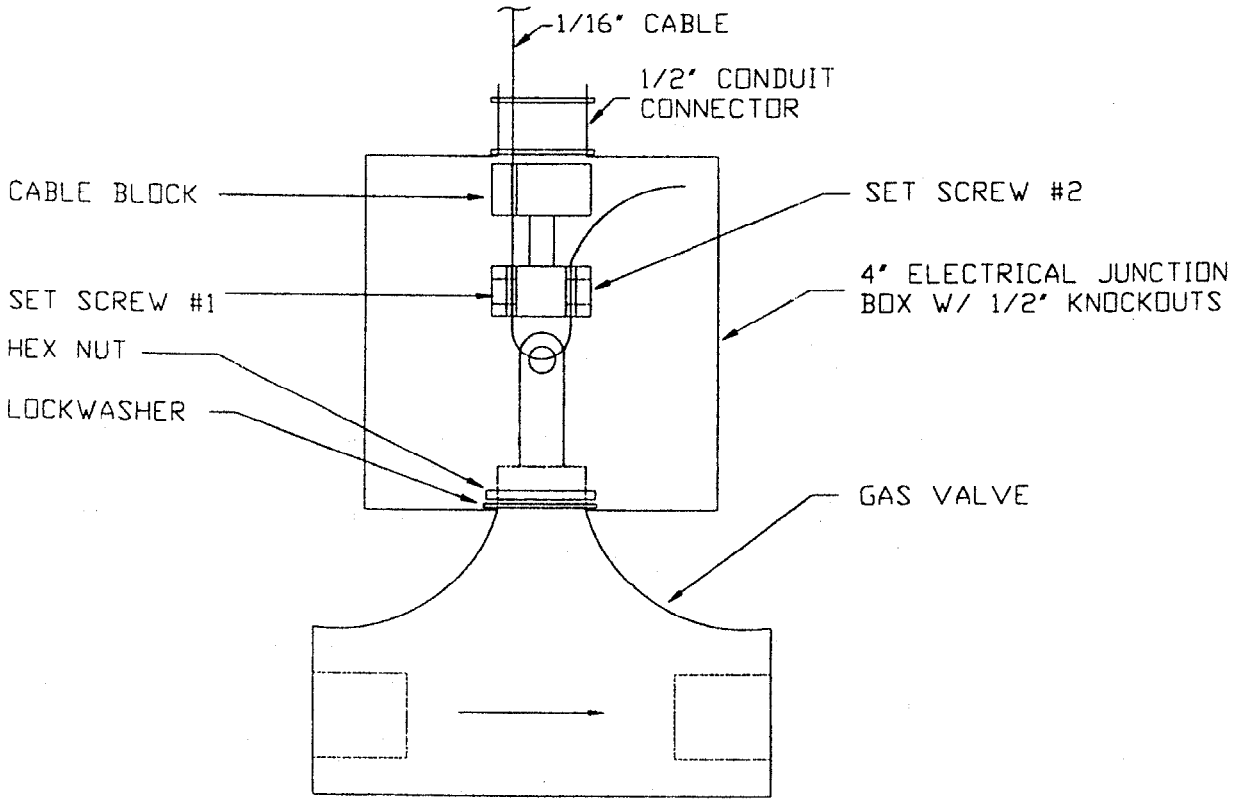
14. Run loose end of cable through hole in gas valve plunger stem and up through open hole in bottom of cable block (see attached details).

15. Pull cable up until gas valve opens fully or until the gas valve plunger stem hits bottom of cable block. Tighten set screw #2 (see attached details).

16. Trim off excess cable. Be sure to leave some excess cable in case future adjustments are required. The gas valve is now set.

17. Test for proper operation of the gas valve(s) before placing the system into service. **NOTE:** DO NOT INSTALL COVER PLATE ON 4" BOX UNTIL FINAL SYSTEM CHECKOUT HAS BEEN COMPLETED.

WARNING:
DO NOT ATTEMPT TO USE MORE THAN ONE PRIMARY CONTROL HEAD TO HOLD OPEN THE SAME MECHANICAL GAS SHUTOFF VALVE.



GAS VALVE DETAIL