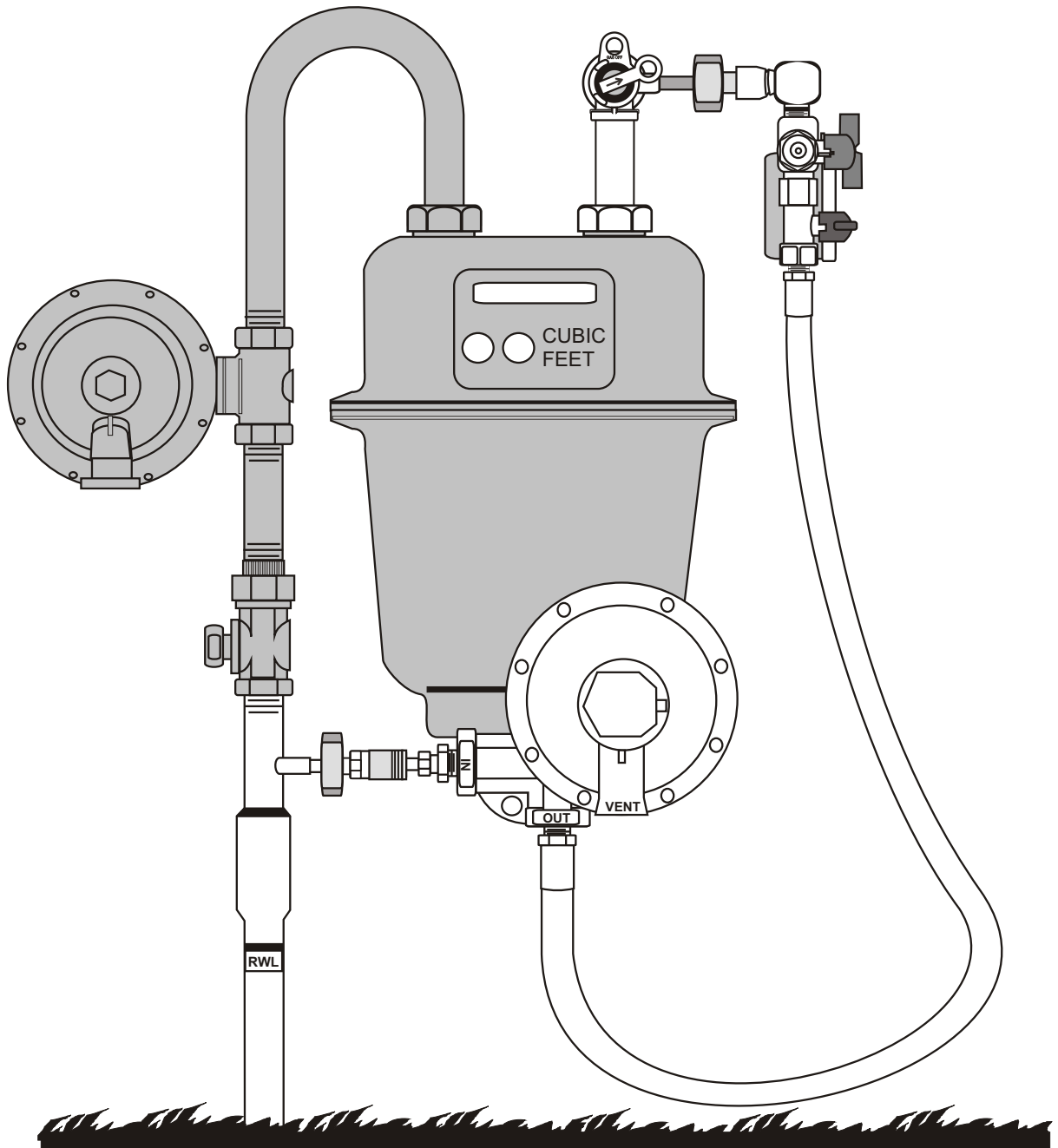
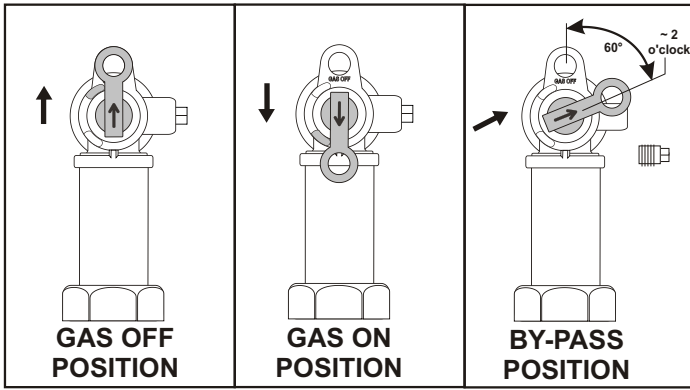


# LYCO CAST A-9 VALVE BY-PASS INSTRUCTION MANUAL



## Customer Service

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### LYCO® A-9 Valve Three Position Control

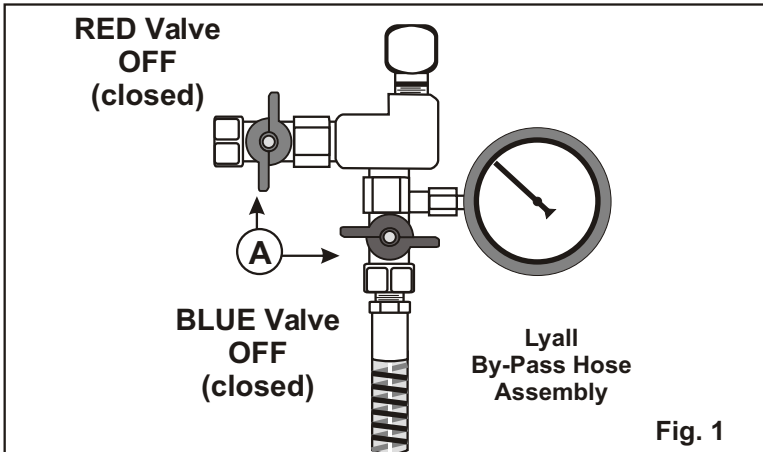
The LYCO® Cast A-9 Valve has three operating positions: Fully Open, Fully Closed, and the By-Pass position. The Arrow indicator located on the stem serves as a position setting:

Upward = Gas Off Position

Downward = Gas On Position

60° (~2 o'clock) = By-pass Position

## BY-PASS INSTRUCTIONS USING THE LYCO BY-PASS HOSE ASSEMBLY



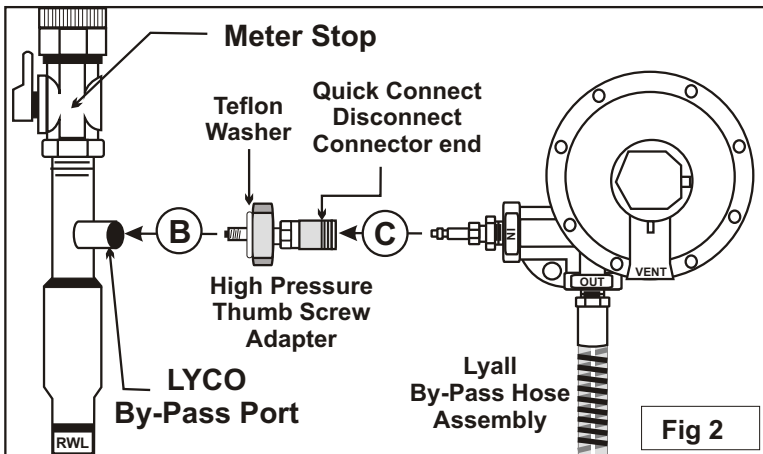
### STEP 1 Hose Setup

- A. Ensure both RED and BLUE ball valves located on the Lyall By-Pass Hose Assembly are in the OFF position (See fig.1 for proper valve handle positions).

### STEP 2 Connecting Inlet Side of Hose Assembly (Using Riser By-Pass Method)

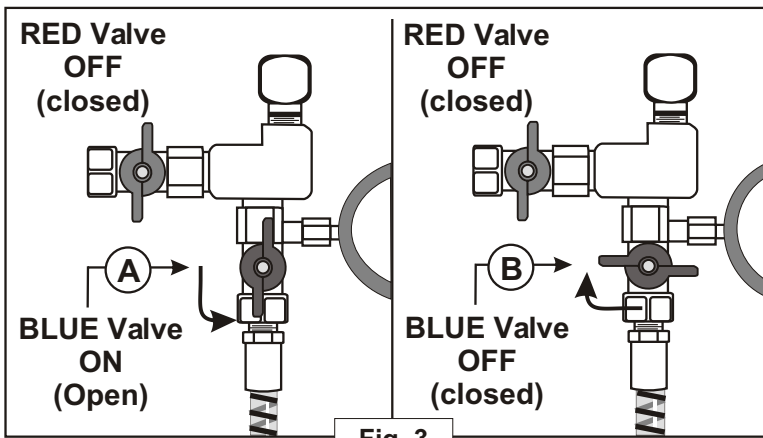
Refer to Fig. 2 for the following set of instructions.

- A. Remove the pipe plug from the By-Pass port located on the meter riser.
- B. Thread the High Pressure Thumb Screw Adapter into the Riser By-Pass Port (ensure Teflon washer is on adapter).
- C. Insert the regulator end of the Lyall By-Pass Hose Assembly to the High Pressure Thumb Screw Adapter via the Quick Connect/Disconnect end of the adapter.



### If Using Supplemental CNG

- A. Adjust the High Pressure Regulator Valve to achieve 60 -80 PSI.
- B. Insert the regulator end of the Lyall By-Pass Hose Assembly to the High Pressure Regulator via the Quick Connect /Disconnect connector.

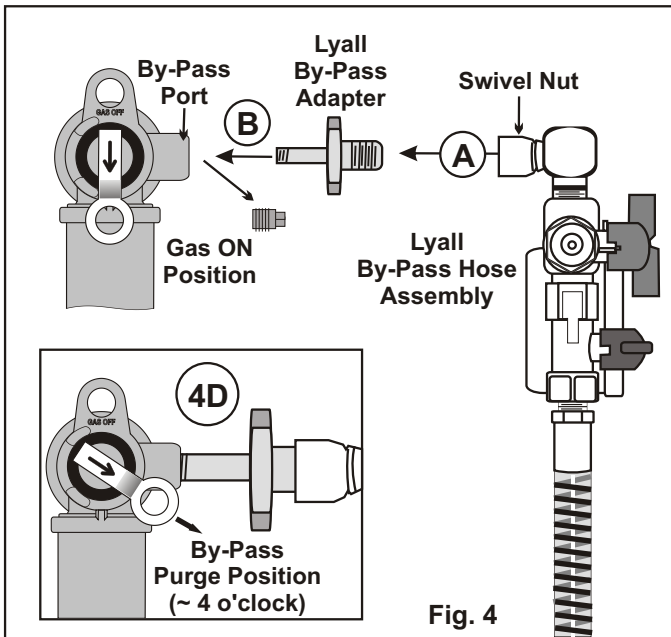


### STEP 3 Purging Hose Assembly

- A. Purge the Lyall By-Pass Hose Assembly, by opening the BLUE handled ball valve\*.
- B. Once the line is purged (approx. 10 sec), close this valve fully.

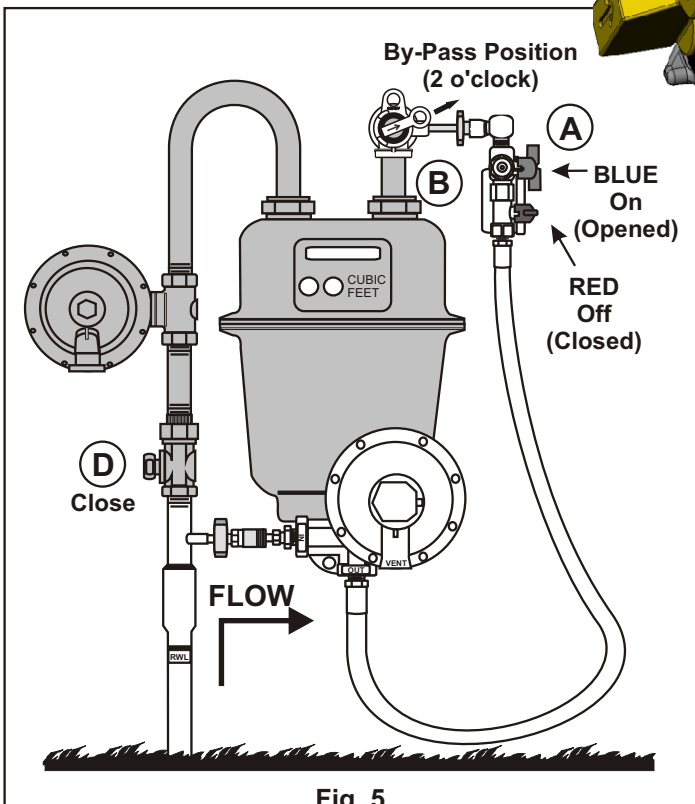
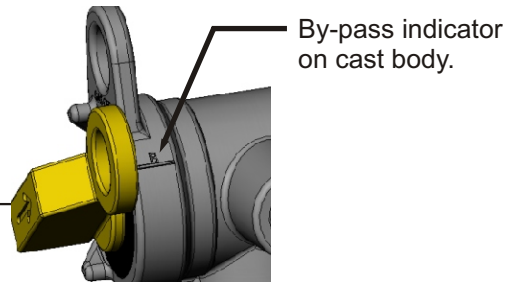
\*NOTE: If gas is not flowing through the By-Pass Hose Assembly at this point, **DO NOT continue the installation until the problem is fixed.** Check that all connections, hose, valves, gauges, supplemental fuel supply, etc., are properly connected and functioning. Fix the problem and repeat Step 3.

Fig. 3



#### STEP 4 Connecting By-Pass Adapter

- A. Before starting, ensure that the proper By-Pass Adapter is connected to the Hose Assembly, also check the meter dial/index to ensure that the current gas flow is not exceeding the by-pass capacity. If flow rate is greater than the maximum of pressure provided through by-pass, reduce gas usage by having appliances reduce fuel consumption..
- B. With the Lyall 90° Angle Valve in the ON position, locate and remove pipe plug from the valve's By-Pass port (refer to Fig. 4).
- C. Attach By-Pass Hose Adapter to By-Pass port.
- D. Open RED valve and turn Lyall 90° Valve to the 4:00 position to purge adapter/valve block.
- E. Close RED Valve.



#### STEP 5 By-Pass Operation

- A. Fully Open Blue valve (on Hose Assembly)
- B. Turn the stem of the Angle Valve from the ON position to the **BY-PASS position** which is at the **TWO-O'CLOCK position** (refer to dimple on side of valve for proper alignment).  
NOTE: Full By-Pass flow rate is not achieved if the stem is not in the 2:00 position).
- C. Be sure to watch the pressure gauge to make sure the pressure does not drop to low or to high (this is a double check to make sure that the service being by-passed is Inches Water Column and not a 2 lb. service).
- D. Close the Meter Stop - You are now in the full By-pass mode.
- E. Meter or regulator change out/repair can now take place. Continually monitor the water column pressure gauge during service repairs to assure adequate pressure is maintained.

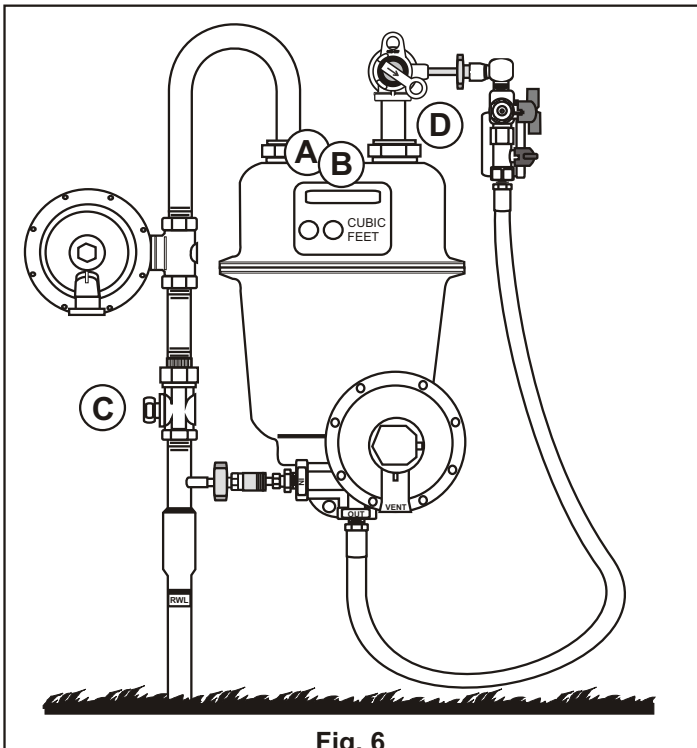


Fig. 6

### STEP 6 Reconnecting Meter Set

- A. Replace the meter by connecting the inlet swivel first, hand tighten only.
- B. Connect the outlet swivel to the meter spud, but leave fairly loose (for purging reasons).
- C. Partially open the meter stop valve (on riser) very SLOWLY, purging the meter of any air. While doing this watch the smallest increment dial on the meter, allowing only one complete revolution of this indicator.
- D. Turn 90° Valve to a position halfway between the By-Pass & Open position (approx. 4:00) to allow air to purge from the swivel.
- E. Once the meter and swivel have been purged of air, tighten both meter swivels to your required specifications.

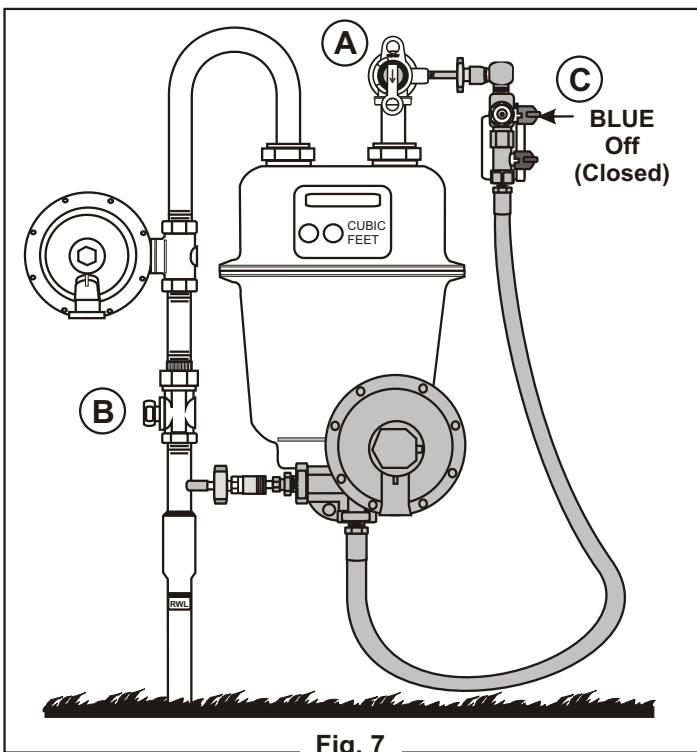


Fig. 7

### STEP 7 Full Service Connect

- A. Turn the LYCO Cast A-9 Valve to the Gas On position (Wing-lock arm downward).
- B. Continue to open the meter stop valve to the fully open position.
- C. Turn off the BLUE handled ball valve on the Lyall By-Pass Hose Assembly while monitoring gauge to assure no loss of pressure has occurred. If using Supplemental CNG Tank or other gas source, turn supply valve off at this point.
- D. Unscrew the By-Pass Adapter from the LYCO Cast A-9 Valve and replace pipe plug into port (Pipe thread sealant may be required).
- E. Release and disconnect the By-Pass Hose Assembly from the High Pressure Thumb Screw Adapter.
- F. If using the Riser By-Pass Method, unscrew the High Pressure Thumb Screw Adapter from riser By-Pass port and replace the pipe plug (Pipe thread sealant may be required).



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