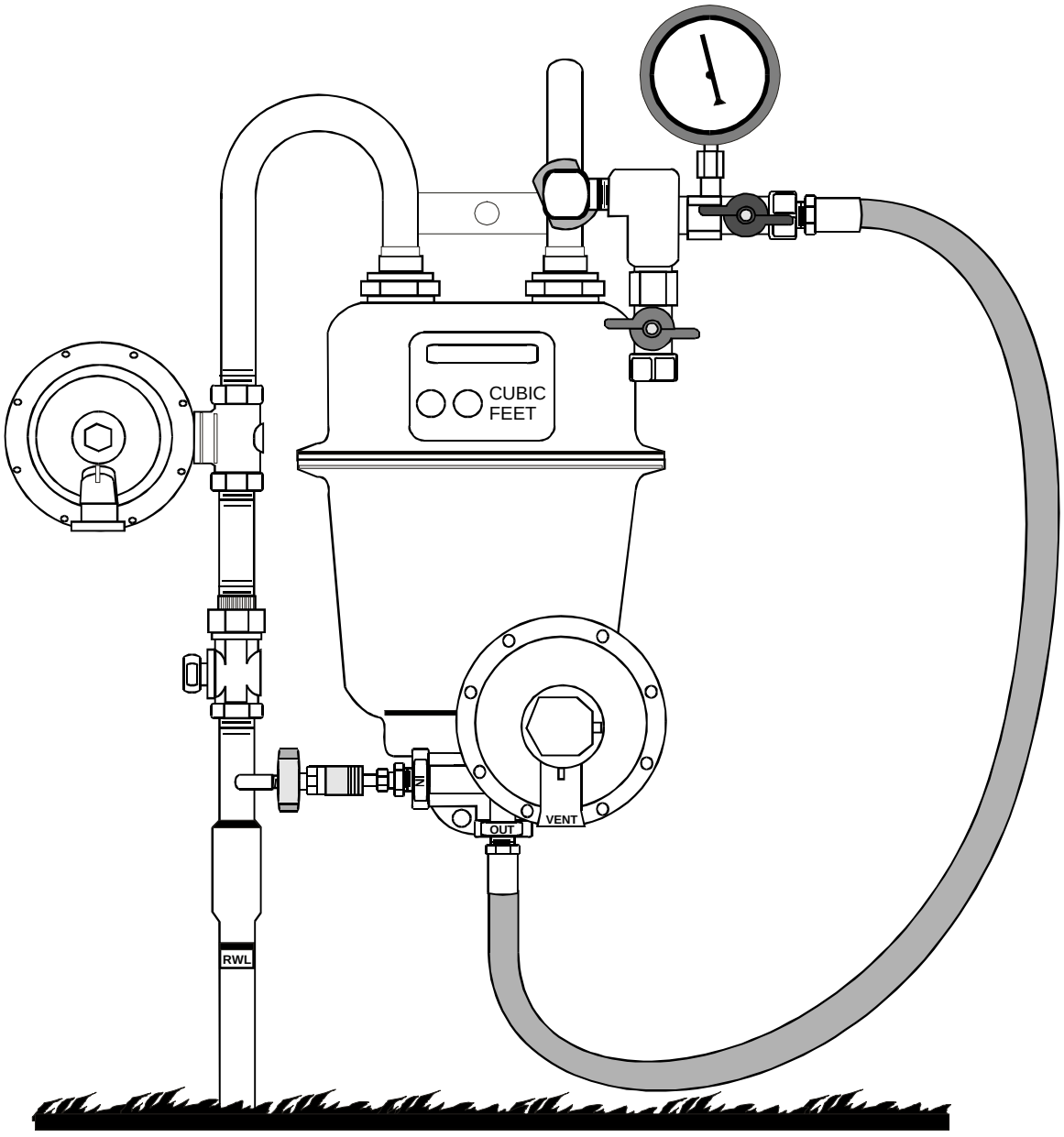
LYCOSAVER® SUPPLEMENTAL BY-PASS INSTRUCTION MANUAL

For Water Column (inches) By-Pass Assembly



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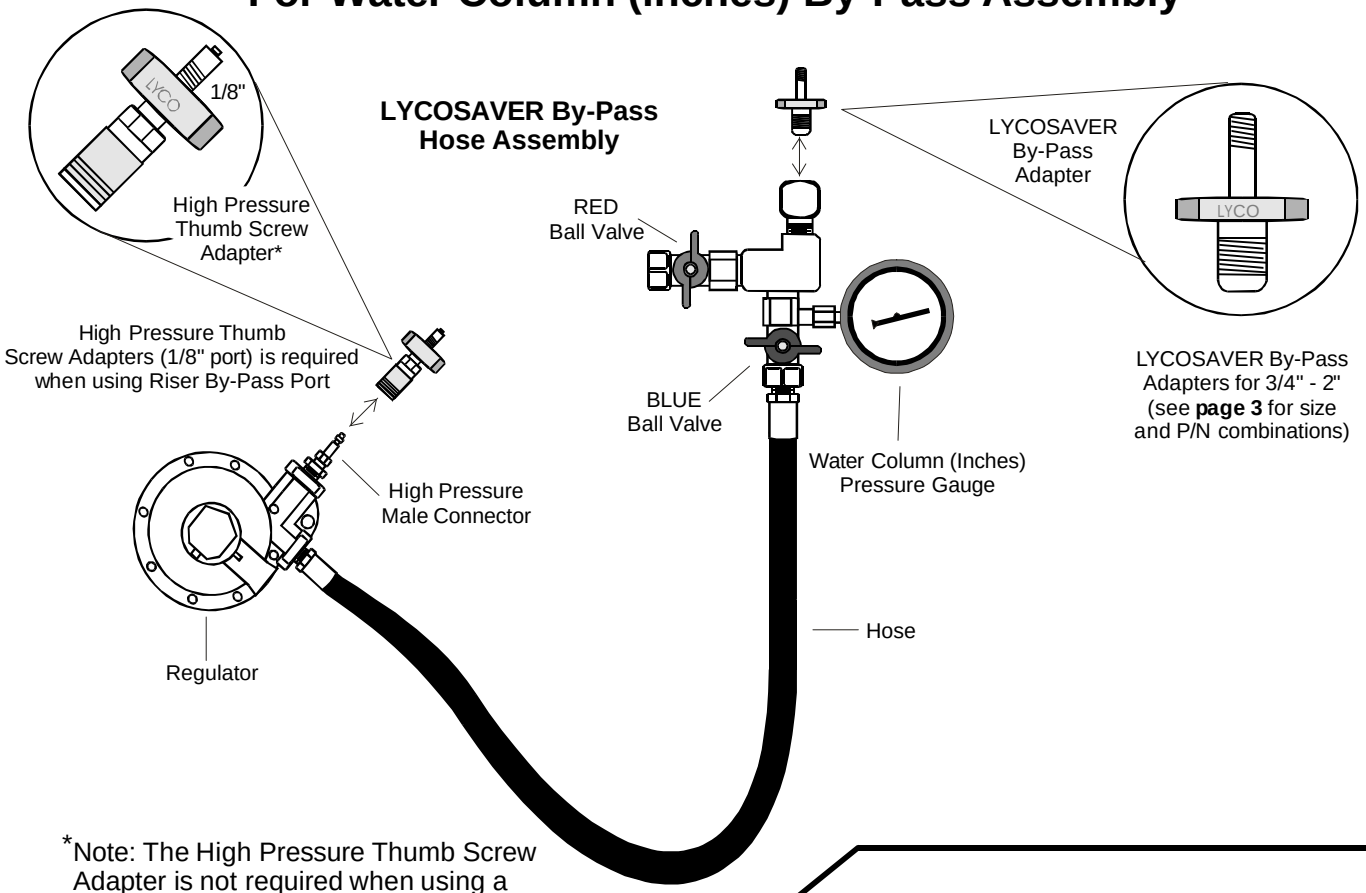
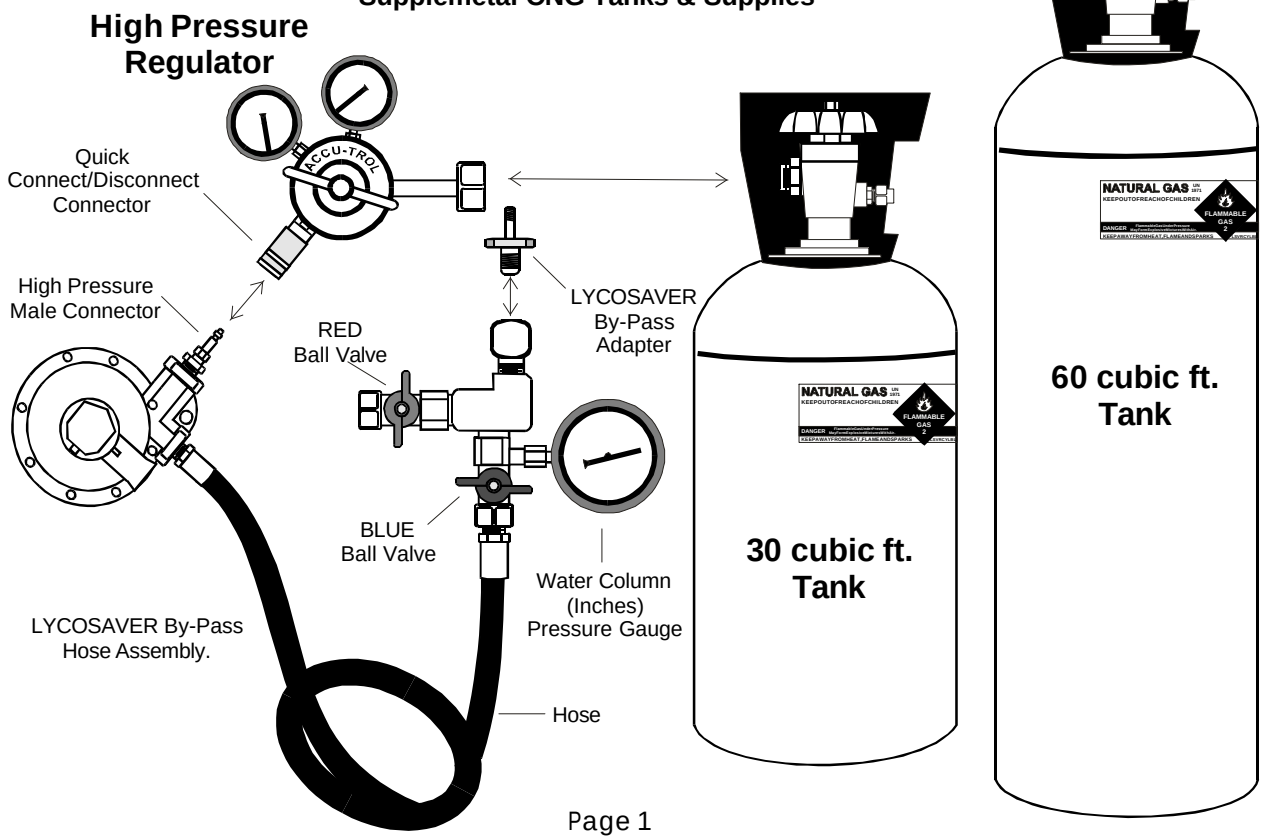
For Water Column (inches) By-Pass Assembly



*Note: The High Pressure Thumb Screw Adapter is not required when using a LYCO Supplemental CNG Tank.

Supplemetal CNG Tanks & Supplies



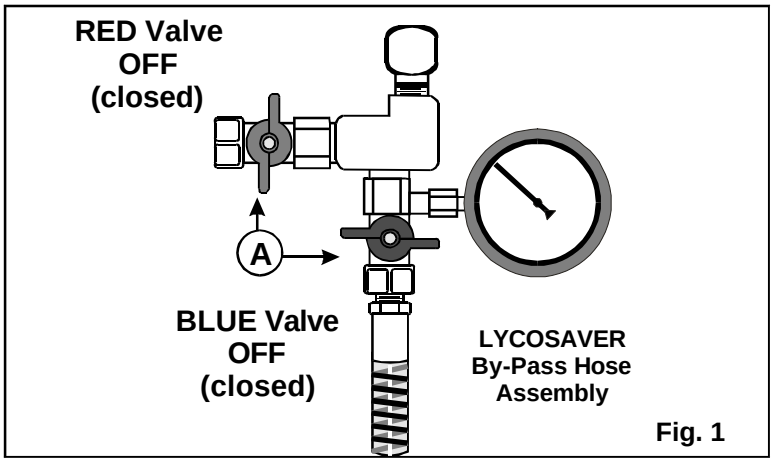


Fig. 1

STEP 1 Valve Setup

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

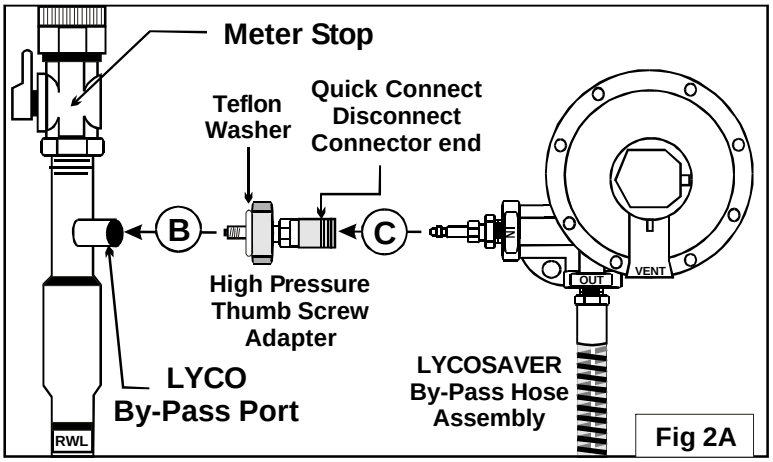


Fig 2A

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

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

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

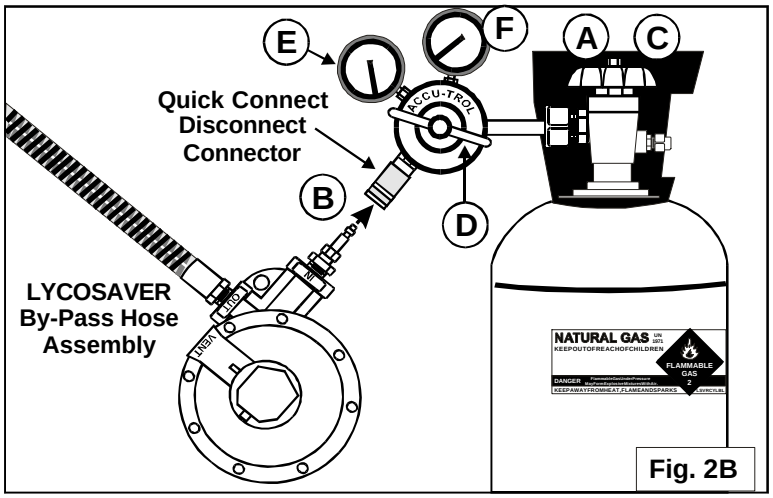


Fig. 2B

[Step 2B Using Supplemental CNG Tank Method]

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

A. Ensure the CNG Tank Valve is turned OFF.
B. Insert the regulator end of the LYCO-SAVER By-Pass Hose Assembly to the High Pressure Regulator via the Quick Connect/Disconnect connector.
C. Fully Open CNG Tank Valve (A)
D. Adjust the High Pressure Regulator Valve to achieve **60 -80 PSI**. Pressure can be read on the left pressure gauge on the regulator (see Fig. 2B (E)). The right gauge displays pressure in the CNG Tank (see Fig. 2B (F).

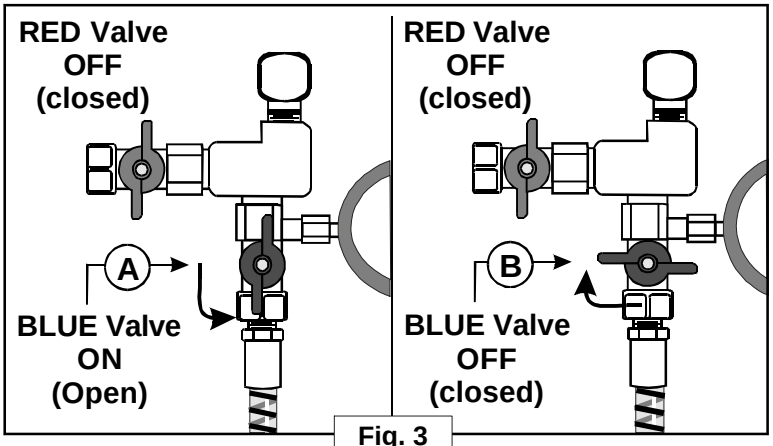
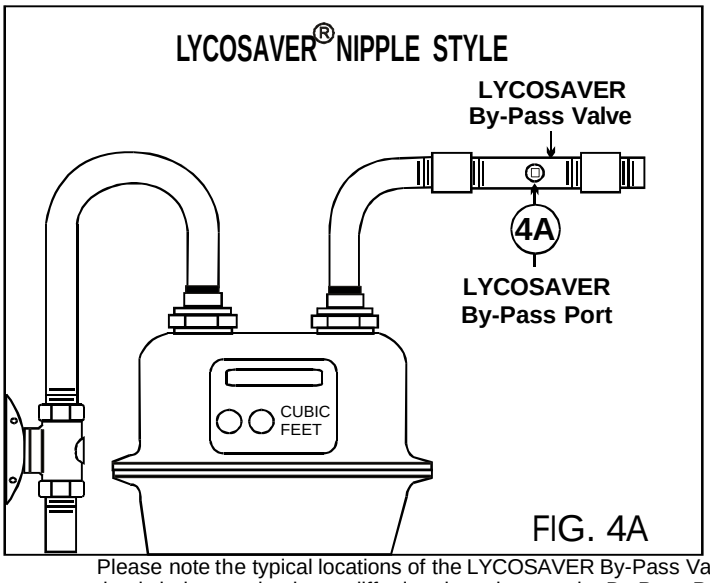


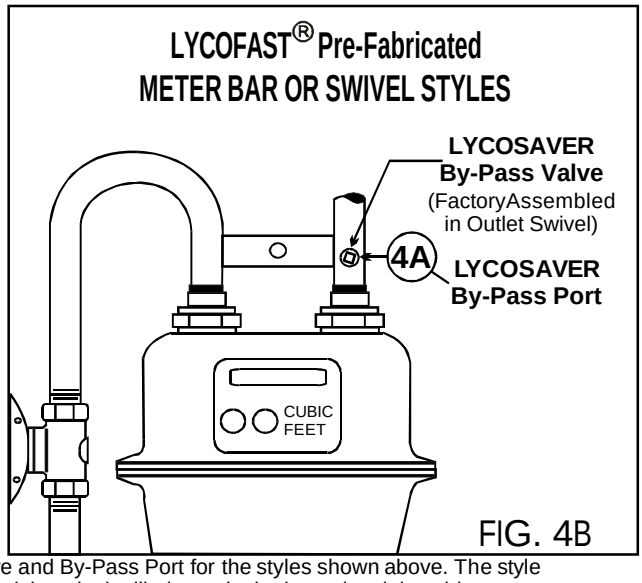
Fig. 3

STEP 3 Purging Hose Assembly

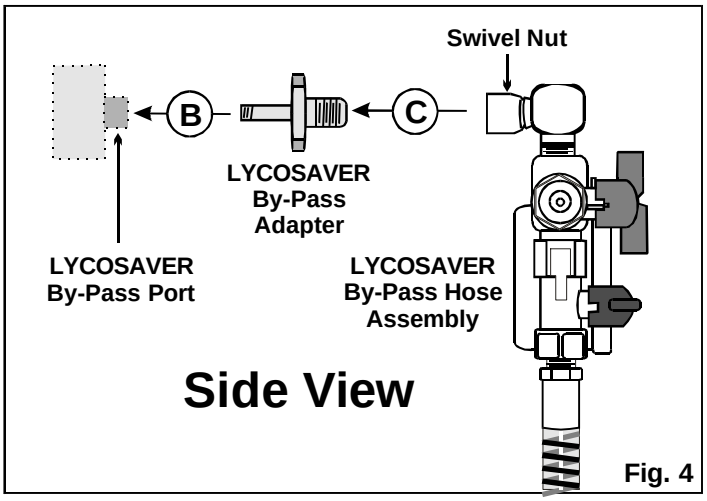
A. Purge the LYCOSAVER By-Pass Hose Assembly, by opening the BLUE handled ball valve*****.
B. Once the line is purged (approx. 10 sec), close this valve fully.

***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.





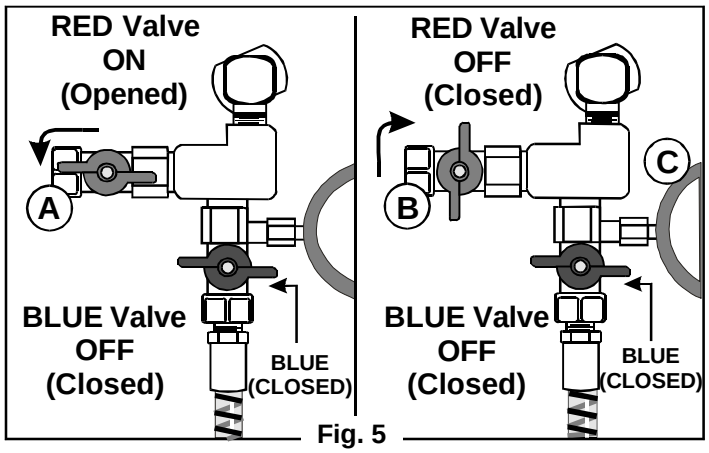
Please note the typical locations of the LYCOSAVER By-Pass Valve and By-Pass Port for the styles shown above. The style that is being serviced may differ in orientation, yet the By-Pass Port (pipe plug) will always be in the outlet piping side.



STEP 4 Connecting By-Pass Adapter

A. Locate and remove pipe plug from the LYCOSAVER By-Pass Valve (refer to Fig. 4A and Fig. 4B above, for approx. location of this port).
B. Thread the LYCOSAVER By-Pass Adapter* into the LYCOSAVER By-Pass port. (pipe thread sealant may be required).
C. With the Blue & Red valves in the Off position, connect the LYCOSAVER By-Pass Hose Assembly to the LYCOSAVER By-Pass Adapter by threading and tightening the swivel nut.

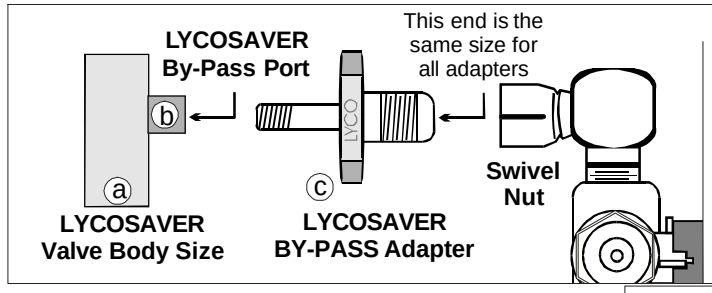
*Note: There are five sizes of LYCOSAVER By Pass Adapters (See Reference Table below for proper configuration).



STEP 5 Purge By-Pass Valve/Adapter Connection

A. Purge any remaining air from the LYCOSAVER By-Pass Valve and Assembly, by opening the RED handled ball valve.
B. Once purged, close this valve fully.
C. The meter set system pressure may now be read on the Water Column Pressure Gauge located on the LYCOSAVER By-Pass Hose Assembly.

LYCOSAVER By-Pass Adapter Reference Table



LYCOSAVER Pipe Body Size (a)	LYCOSAVER By-Pass Port (b)	LYCOSAVER By-Pass Adapter LYCO P/N (c)
3/4"	1/8" NPT	LSVR-10A
1"	1/4" NPT	LSVR-10B
1-1/4"	3/8" NPT	LSVR-10C
1-1/2"	1/2" NPT	LSVR-10D
2"	3/4" NPT	LSVR-10E

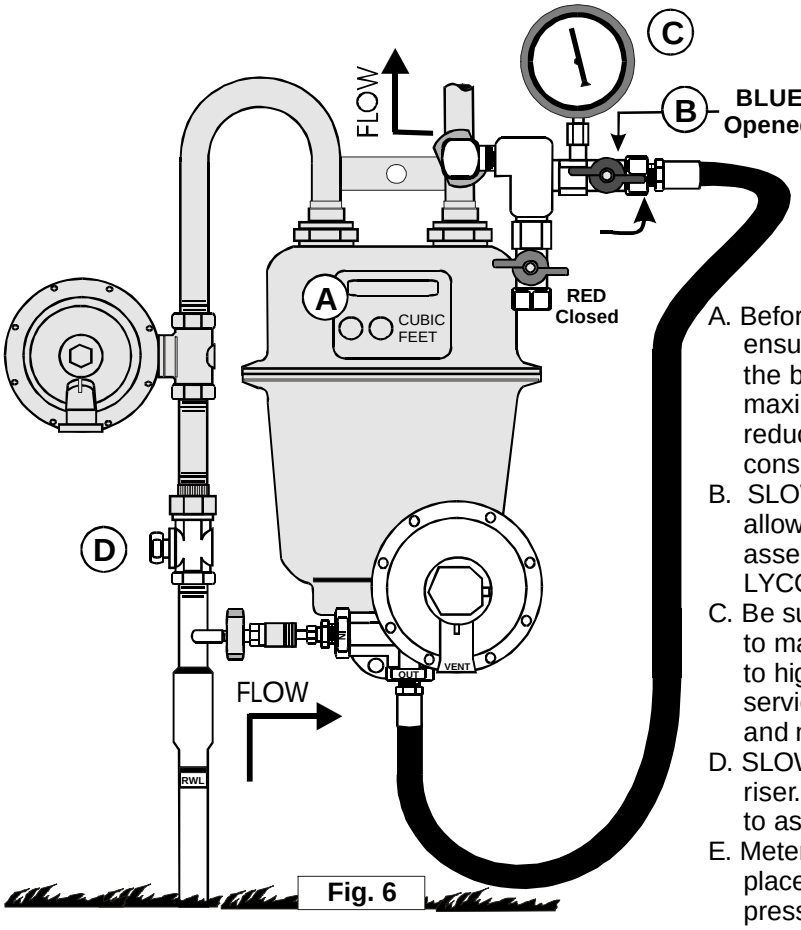


Fig. 6

NOTE:
All remaining steps are for all LYCOSAVER By-Pass methods (except where noted), though the figures only illustrate the use of the Riser By-Pass method, the steps and locations of the call outs are the same for all methods.

STEP 6 Completing By-Pass

A. Before continuing, 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. SLOWLY open the BLUE handled ball valve, allowing the gas to by-pass the regulator and meter assembly and enter the dwelling via the LYCOSAVER By-Pass assembly.

C. Be sure to watch the water column 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. SLOWLY turn off the main meter stop valve on the riser. Continue to monitor the water column gauge to assure adequate pressure is being supplied.

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.

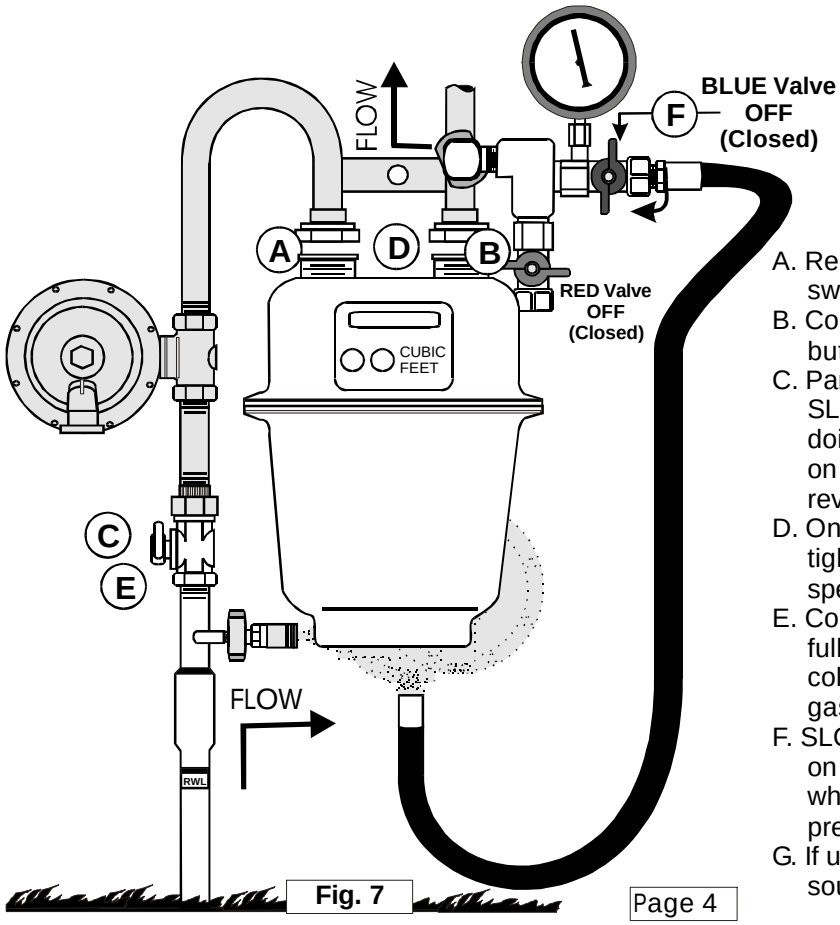


Fig. 7

STEP 7 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 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. Once the meter has been purged with gas, tighten both meter swivels to your required specifications.

E. Continue to open the meter stop valve to the fully open position. Again, watch the water column pressure gauge to assure no loss of gas pressure.

F. SLOWLY turn off the BLUE handled ball valve on the LYCOSAVER By-Pass Hose Assembly while monitoring gauge to assure no loss of pressure has occured.

G. If using Supplemental CNG Tank or other gas source, turn supply valve off at this point.

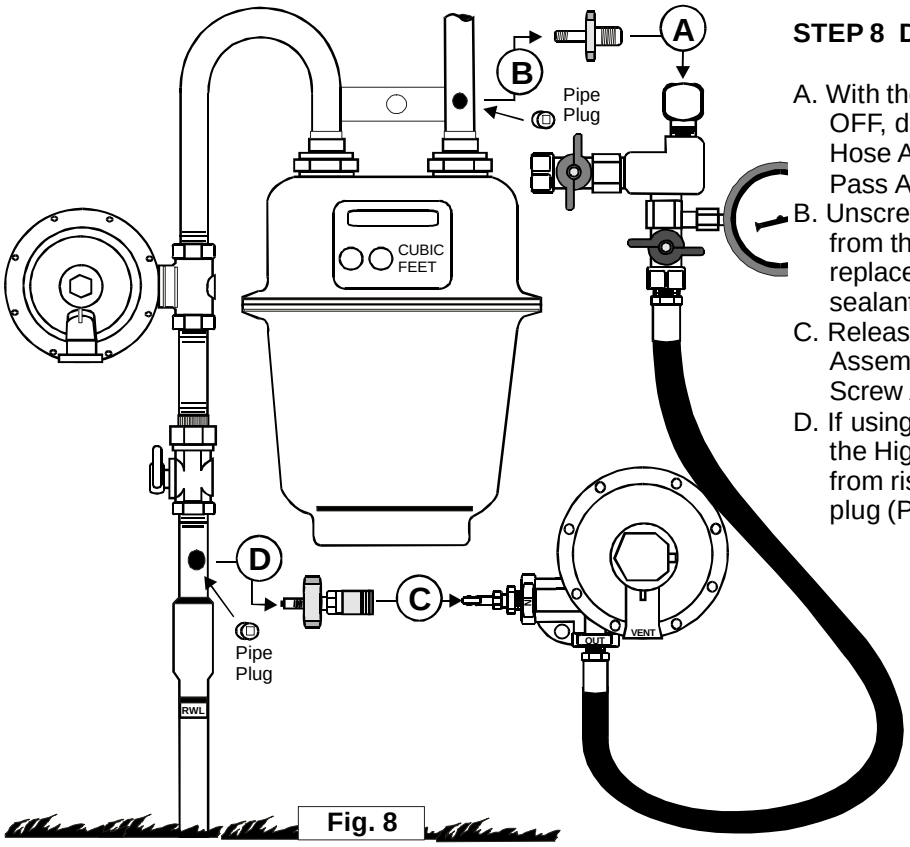


Fig. 8

STEP 8 Disconnect By-Pass Assembly

A. With the BLUE handled ball valve turned OFF, disconnect the LYCOSAVER By-Pass Hose Assembly from the LYCOSAVER By-Pass Adapter

B. Unscrew the LYCOSAVER By-Pass Adapter from the LYCOSAVER By-Pass Valve and replace pipe plug into port (Pipe thread sealant may be required).

C. Release and disconnect the By-Pass Hose Assembly from the High Pressure Thumb Screw Adapter.

D. 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).

LYCOSAVER TECHNICAL NOTE: The LYCOSAVER By-Pass Valve will by-pass properly at the same pressure provided by the service regulator. The by-pass pressure only needs to be increased over the service regulator pressure to meet current service flow. Specifications for pressure drops vs. flow ratings, and inlet pressure vs. maximum flow rates for each size of LYCOSAVER By-Pass Valve is referenced in the LYCOSAVER Technical Data Package (TDP).

SAFETY NOTES:

NOTE: All joints of the meter service set should be leak tested prior to leaving the site. Test should include checking the pipe plug ports as well.

NOTE: While removing pipe plugs from ports, a small amount of gas may escape though the port, use caution and standard safety procedures while servicing the meter set.

NOTE: As a safety precaution, all gas appliances should be checked to ensure that pilots are still lit and functioning properly. Though the LYCOSAVER By-Pass is designed to supply uninterrupted gas service, momentary disruption may have occurred during hook-up/disconnect procedures and/or improper purging techniques are being used. If this continues to be a problem, the water column gauge or hose assembly unit may require servicing and/or additional training may be required for proper use of these procedures.