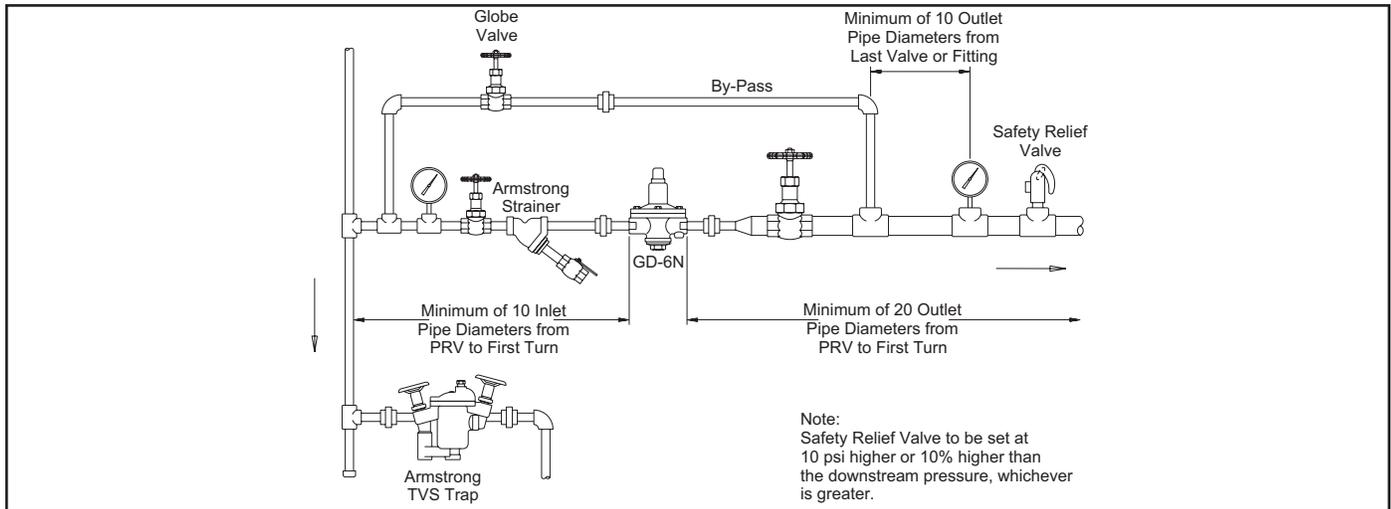




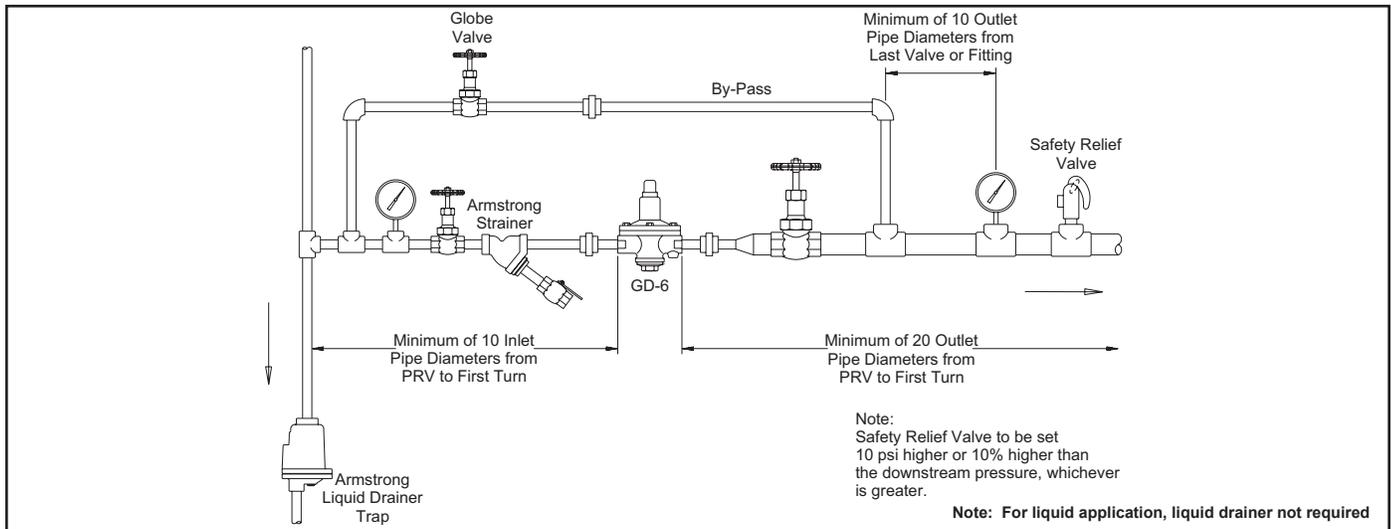
Model GD-6, GD-6N Pressure Reducing Valve

Installation and Maintenance Instructions

Installation for Steam Service - Model GD-6N



Installation for Liquid/Gas Service - Model GD-6



This bulletin should be used by experienced personnel as a guide to the installation of the Models GD-6 and GD-6N Pressure Reducing Valves. Selection or installation of equipment should always be accompanied by competent technical assistance. You are encouraged to contact Armstrong International, Inc. or its local representative for additional information.

Installation Instructions

1. An Armstrong Inverted Bucket Steam Trap is recommended to drain condensate at the inlet of the Pressure Reducing Valve (PRV). A Liquid Drainer is recommended for gas service.
2. An Armstrong Y-Strainer (20-100 mesh, depending on system dirt) should be installed before the PRV to reduce the chance of dirt fouling.
3. Pressure gauges should be installed before and after the PRV.
4. If system cannot be turned off to service PRV then piping a by-pass line with a high quality globe valve around the PRV will allow manual system operation while the PRV is being serviced.
5. Do not install quick opening or closing valves downstream of the PRV.
6. Install the PRV with the flow in the direction of the arrow on the body.

Start-Up and Adjustment Procedures

Improper adjustment of the pressure reducing valve may cause hunting, scale problems, water hammer, etc., and damage to the valve itself. Damaged pressure gauges, leakage or opening of a bypass valve, or clogging of an inlet strainer may cause problems similar to that of a malfunctioning reducing valve.

Adjust the valve as follows:

1. Close the gate valves before and after the pressure reducing valve. Open the globe valve slowly in the bypass line and blow down the inlet piping. Adjust the opening of the bypass valve so the safety valve, if installed, does not blow. After blowing the system down, close the bypass valve.
2. Loosen the lock nut and adjusting screw to relieve the adjusting spring.
3. **Slowly** open the inlet side gate valve to the fully open position, and partially open the outlet valve so only a small amount of steam, liquid or gas can pass.
4. **Slowly** turn the adjusting screw clockwise until the desired pressure is obtained on the downstream pressure gauge.
5. **Slowly** open the outlet valve to the fully open position.
6. Adjust pressure again after system stabilizes and when there is a load on the system. Turning the adjusting screw: - Clockwise **increases** pressure, counter-clockwise **decreases** pressure.
7. Tighten the adjusting screw lock nut after adjustment is completed.

Troubleshooting Guide

Problem	Causes	Solutions
The desired pressure cannot be obtained.	The inlet pressure is too low or high.	Adjust the pressure to the appropriate level.
	The sensing port of the outlet pressure is clogged with foreign matter.	Disassemble and clean the sensing port.
	The valve size is smaller than what is required.	Change the valve size to the appropriate one.
	The adjustment is not appropriate.	Readjust according to the adjustment procedure. (See start-up procedure)
	The inlet strainer is clogged by foreign substance.	Disassemble and clean the strainer.
	The pressure gauge is not properly functioning.	Replace the pressure gauge.
The outlet pressure rises higher than the specified pressure	The valve or the valve seat are contaminated by foreign substance.	Disassemble and clean the valve or the seat.
	The by-pass valve is leaking.	Repair or replace the by-pass valve.
	Excessive air is in the system.	Install an air vent.
Abnormal noise is heard.	The reducing ratio is greater than 10:1.	Reduce pressure by staging with second PRV.
	Water hammer (for steam service)	Install a drip trap before the PRV.
	Air trouble (for liquid service)	Install an air vent.
	There is a fast closing valve near the PRV.	Provide as much distance as possible between the two valves.

GD-6N (Steam)

Disassembly

Main Valve

1. Turn the bottom cap (2) counter-clockwise for removal. Then remove the valve (7) and the spring (16) from the body (1).

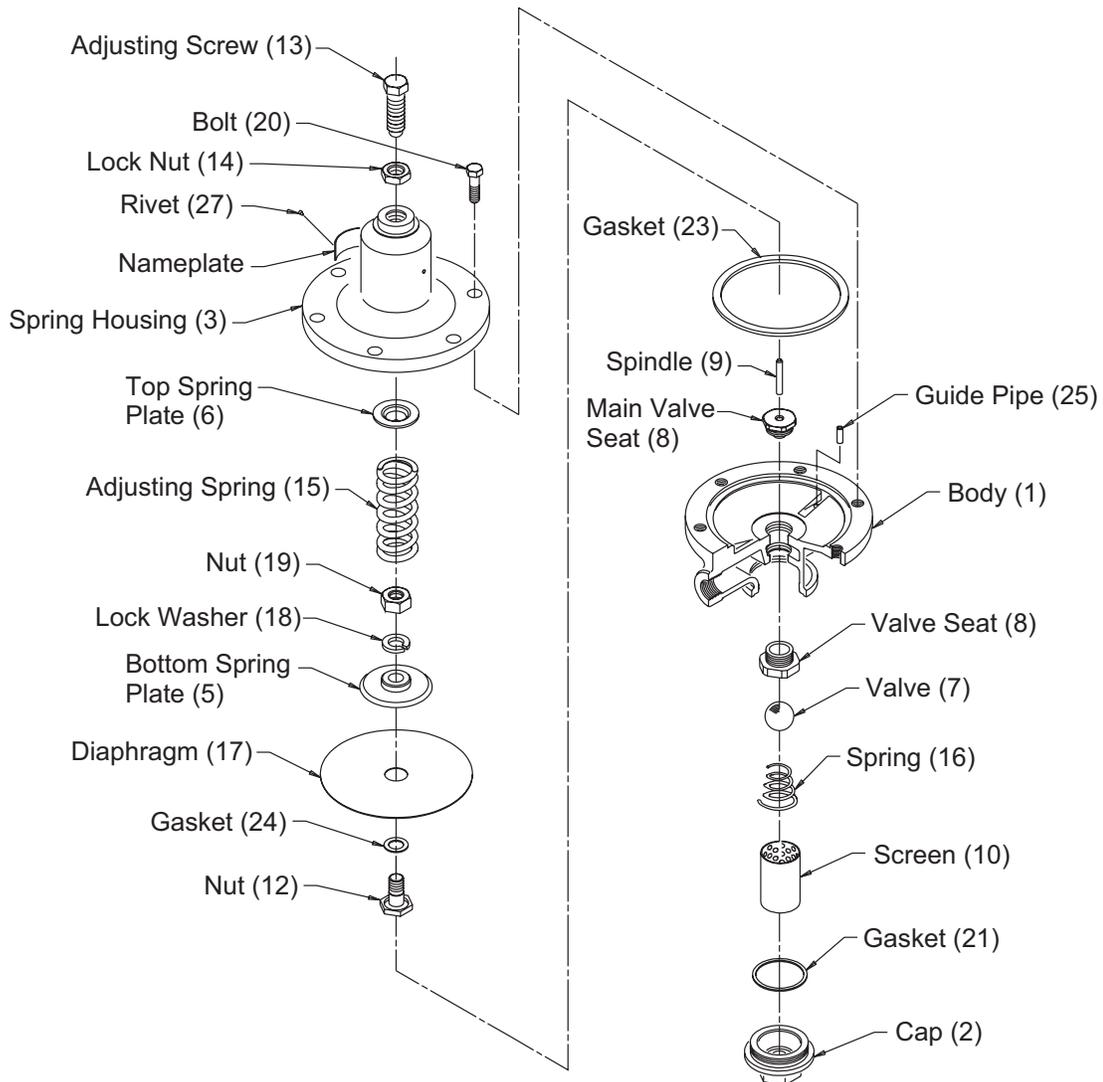
Diaphragm

1. Remove the cap (not shown) and loosen the lock nut(14). Turn the adjusting screw (13) counter-clockwise to unload spring tension.
2. Remove the spring housing bolts (20) and the spring housing (3). Remove the top spring plate (6), the adjusting spring (15) and the diaphragm (17).

Reassembly

1. Check to be sure that the valve and seat are not damaged.
2. Reassemble in reverse order.

Note: Replace all gaskets where disassembly is required.



GD-6 (Liquid/Gas Service)

Disassembly

Main Valve

1. Turn the bottom cap (2) counter-clockwise for removal. Then remove the valve (7) and the spring (18) from the body (1).

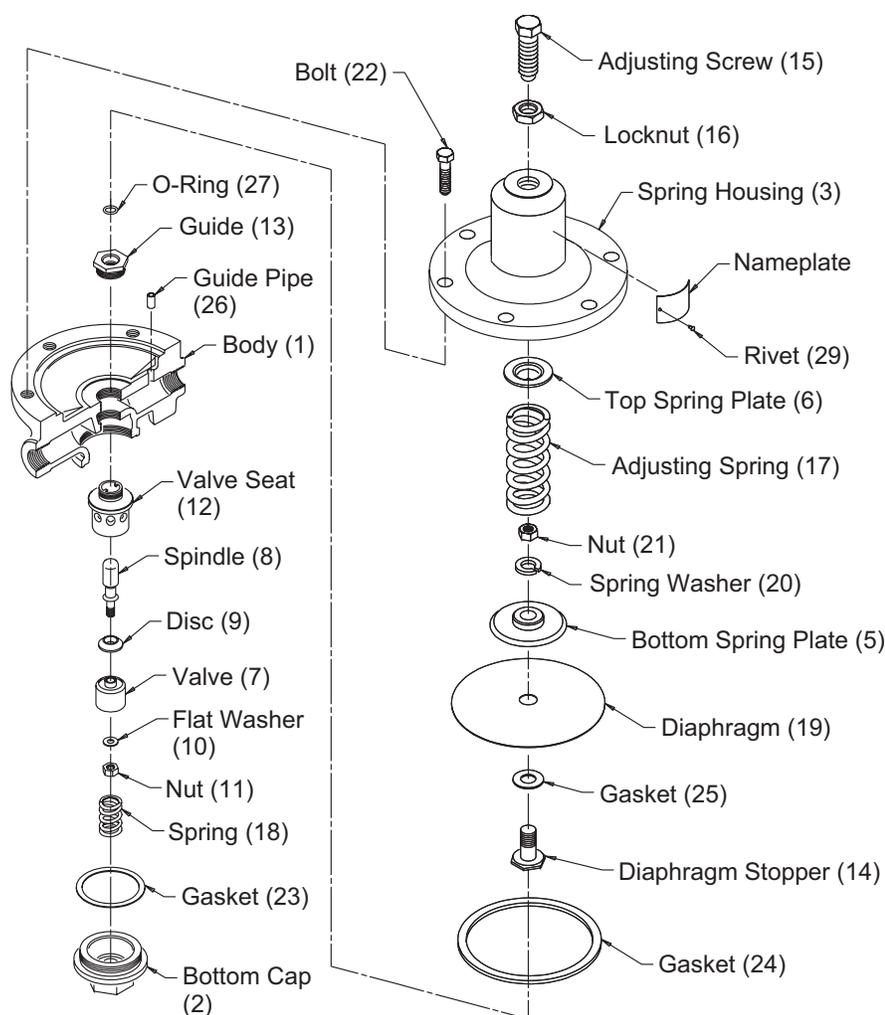
Diaphragm

1. Remove the cap (not shown) and loosen the lock nut (16). Turn the adjusting screw (15) counter-clockwise to unload spring tension.
2. Remove the spring housing bolts (22) and the spring housing (3). Remove the top plate (6), the adjusting spring (17) and the diaphragm (19).

Reassembly

1. Check to be sure that the valve and seat are not damaged.
2. Reassemble in reverse order.

Note: Replace all gaskets where disassembly is required.



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