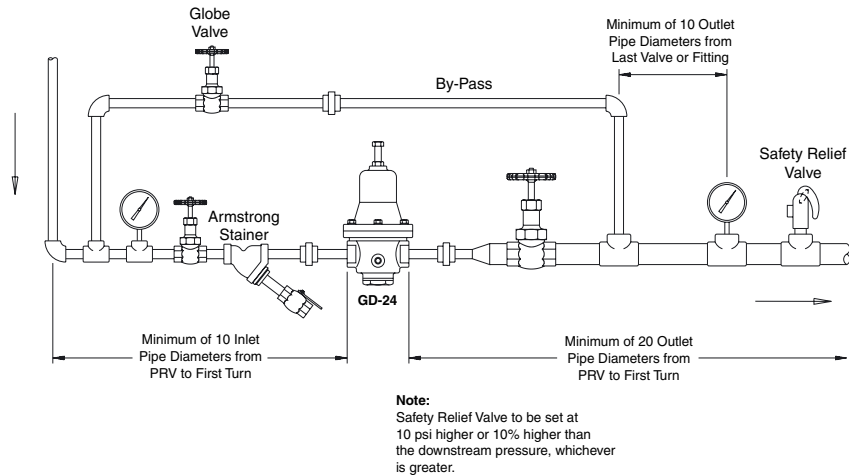




# Model GD-24 Pressure Reducing Valve Installation, Operation and Maintenance Instructions

**\*Illegal for potable water service per SDWA Section 1417 (as amended).**

## Typical Single Stage Reduction Installation (For Water)



*This bulletin should be used by experienced personnel as a guide to the installation of the Model GD-24 Pressure Reducing Valve. Selection or installation of equipment should always be accompanied by competent technical assistance. You are encouraged to contact Armstrong International, Inc. or its local sales representative for additional information.*

## Installation Instructions

1. An Armstrong "Y" strainer (20 – 100 mesh, depending on liquid quality) should be installed before the PRV to reduce the chance of dirt fouling.
2. Pressure gauges should be installed before and after the PRV.
3. Piping a bypass line with a globe valve around the PRV will allow system operation while the PRV is being serviced. Install only if fluid cannot be shut-off to service PRV.
4. Do not install quick opening or closing valves downstream of PRV.
5. Install the PRV with the flow in the direction of the arrow on the body.

## Startup and Adjustment Procedures

Improper adjustment of the pressure reducing valve may cause hunting, improper control, and possible damage to the valve itself. Adjust the valve as follows:

1. Close the gate valves before and after the PRV. Open the bypass valve **slowly** in the bypass line and blow the system down. Care should be taken not to open the bypass completely to prevent the safety relief valve (if installed) from popping off. After blowing down the system, close the bypass valve.
2. Loosen the lock nut on the adjusting screw to allow adjustment. Relieve the adjusting spring. See Figure 2-1.
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 fluid 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. Turning the adjusting screw; Clockwise **increases** pressure and Counterclockwise **decreases** pressure.
7. Tighten the adjusting screw lock nut after adjustment is completed.

# Troubleshooting Guide

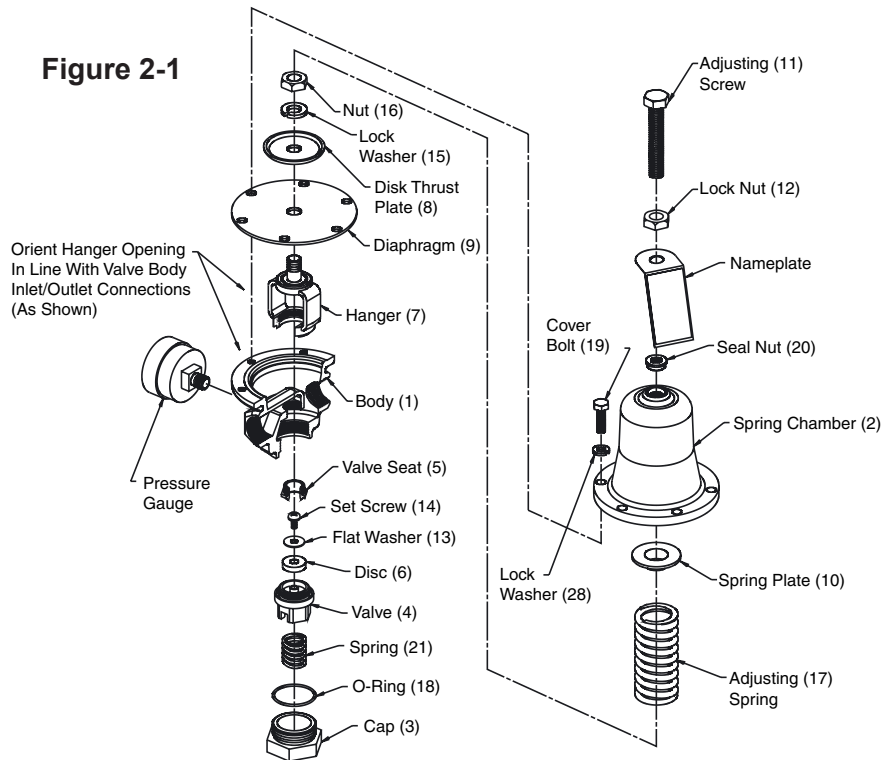
Problem	Causes	Solutions
The intended pressure cannot be obtained.	Inlet pressure is too low or too high.	Adjust the pressure to the appropriate level.
	The inlet strainer is clogged.	Disassemble and clean the strainer.
	The adjustment is not appropriate.	Readjust the valve according to the adjusting procedure. (See start-up procedure.)
	The pressure gauge is out of order.	Replace the pressure gauge.
	The valve size is smaller than what is required.	Replace the valve with a suitable size valve.
The reduced pressure is higher than the specified level.	The valve and valve seat are contaminated by a foreign substance.	Disassemble and clean the valve body and the valve seat.
	The bypass valve is leaking.	Repair or replace the bypass valve.
	The diaphragm is ruptured.	Replace the diaphragm.
Abnormal noise is heard.	Excessive air is in the system.	Install an air vent.
	The valve size is larger than what is required.	Install the correct size valve.
	A quick operating valve is installed near the pressure reducing valve (i.e. solenoid valve).	Provide as much distance as possible between the two valves.

## Disassembly

The GD-24 PRV is composed of two components: body and spring chamber.

1. To remove the spring chamber, loosen the lock nut, turn the adjusting screw counter-clockwise until it can be turned easily by your fingers, and then remove the cover bolts.
2. To remove the diaphragm, detach the diaphragm from the body flange surface and then loosen the hexagon nut on top of the disk thrust plate for disassembly.
3. Remove body cap on the bottom of the valve. Once off, take out the O-ring and valve spring.
4. To remove the valve, turn the valve counter-clockwise using the slots in the bottom of the valve to unscrew it from the hanger.

Figure 2-1



### Notes to Reassembly

Reassemble in the reverse order of disassembly.