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## INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS FOR TYPE D36 WATER PRESSURE REDUCING VALVES

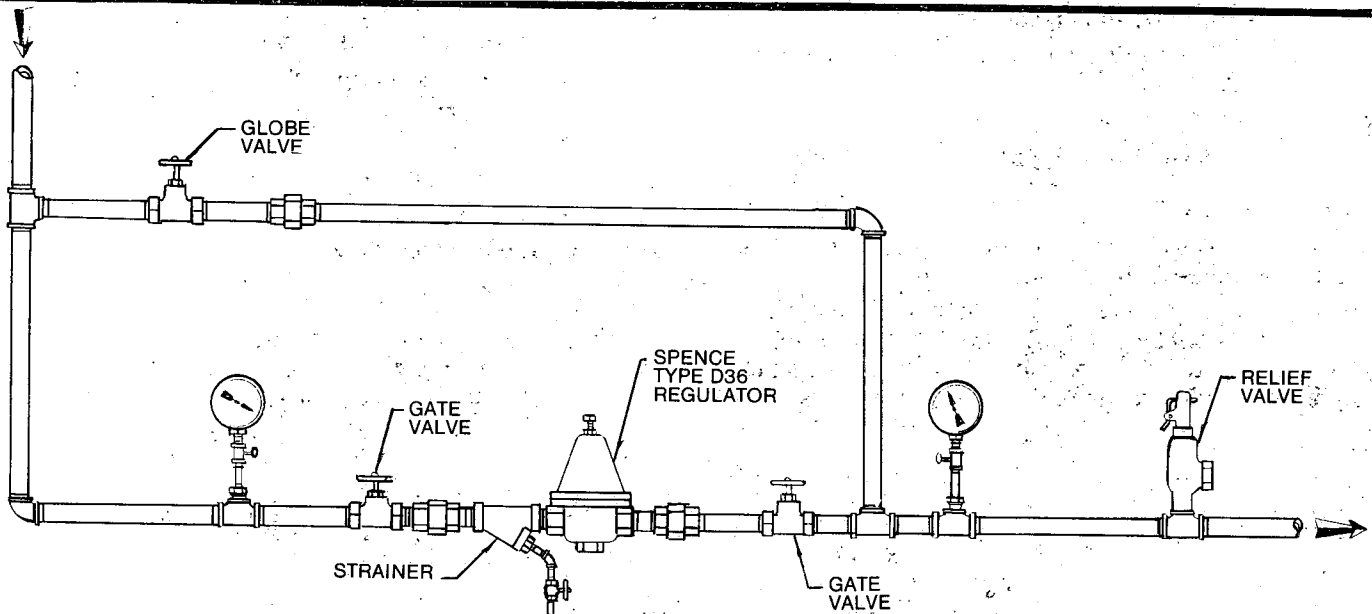


Fig. 1 - RECOMMENDED INSTALLATION OF LIQUID PRESSURE REGULATOR

**Caution:** Hazardous fluids may be handled by this valve. Only qualified personnel who are familiar with your installation should be permitted to install, readjust, inspect or maintain valve.

### A. INTENDED PURPOSE

The Spence Type D36 Direct Operated Water Pressure Reducing Valve is designed for liquid pressure reduction, where very fast reaction to intermittent flows or rapid changes are a system requirement. The Type D36 will decrease violent system pressure fluctuations, however cushioning devices should be incorporated in the system when piping, flow or other conditions warrant their use.

### B. PLANNING THE INSTALLATION

1. Locate the Pressure Reducing Valve in a straight run of horizontal pipe (Fig. 1).
2. Allow access room above and below the valve for inspection and maintenance.
3. Avoid the damaging effects of scale and dirt in pipe lines by installing a Spence Y Type Strainer as shown in Fig. 1.
4. Provide a 3 valve by-pass to facilitate inspection and maintenance without interrupting service.
5. If the pressure rating of the downstream piping or connected equipment is less than the initial pressure and to protect against possible thermal expansion of the liquid, install a relief valve as shown in Fig. 1.
6. Install initial and delivery pressure gauges to monitor performance. When long runs of piping are involved, the delivery pressure gauges should be located as close to the process or equipment controlled as practical.

### C. INSTALLING THE VALVE

1. Flush the piping system thoroughly to clear it of any debris.
2. Mount the valve between unions with the flow arrows on the body pointing in the direction of the flow. The valve may be mounted with spring chamber either up or down, whichever is convenient.

### D. ADJUSTING THE DELIVERY PRESSURE

1. When received, the Type D36 Water Pressure Reducing Valve has been preset to either 50 psi or the pressure listed on the box label.  
 To change the delivery pressure:
  - a. Loosen the Locknut, 2 Fig. 2, on the adjusting screw.
  - b. Turn the Adjusting Screw, 1 Fig. 2, clockwise to increase the delivery pressure **(or)**
  - c. Turn the Adjusting Screw, 1 Fig. 2, counterclockwise to decrease the delivery pressure.
  - d. Retighten the Locknut, 2 Fig. 2.

### E. TROUBLESHOOTING

1. Inadequate flow or delivery pressure:
  - a. Initial pressure may be down due to a partially closed supply valve, clogged strainer, or other obstruction.

d. Adjusting Spring, 6 Fig. 2, may have been tampered with, or broken.

2. Reduced pressure builds up:

- a. By-pass valve may be leaking.
- b. Adjusting Spring, 6 Fig. 2, may have been tampered with.
- c. Valve may be held open by foreign matter.
- d. Valve Diaphragm, 12 Fig. 2, may be broken.

**F. MAINTENANCE**

1. Under normal operating conditions, complete dismantling at regular intervals is not recommended.
2. Before inspection, cleaning or replacement of worn or broken parts, make certain that the Pressure Regulator has been isolated from the initial and delivery pressures. Make sure that any internal pressure in the valve has

been relieved. If a hot or otherwise hazardous fluid is handled by the valve, appropriate precautions should be taken prior to disassembling the valve or removing it from the line.

3. Disassemble the valve as outlined below:

- a. Relieve the compression from the Adjusting Spring, 6 Fig. 2.
- b. Remove Guide Cap, 20 Fig. 2.
- c. Remove Disc Holder, 17 Fig. 2
- d. Remove Spring Chamber, 7 Fig. 2
- e. Remove Stem Yoke Nut, 8 Fig. 2

4. Reassemble in reverse order.

5. When ordering parts, refer to the parts list, Fig. 2. Order parts by part name, valve size, and include the Item Number from the Name Plate, 4 Fig. 2.

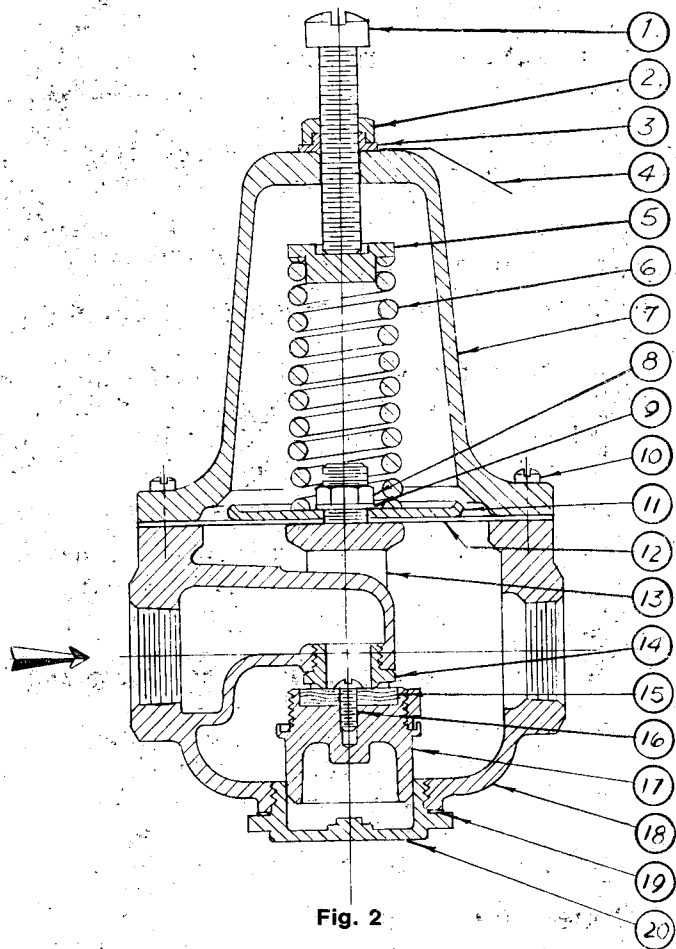


Fig. 2

PC NO.	NAME
1	ADJUSTING SCREW
2	LOCK NUT
3	SEAL
4	NAME PLATE
5	SPRING BUTTON
6	ADJUSTING SPRING
7	SPRING CHAMBER
8	STEM YOKE NUT
9	LOCK WASHER
10	CAP SCREW
11	PRESSURE PLATE
12	DIAPHRAGM
13	STEM YOKE
14	SEAT RING
15	DISC
16	DISC SCREW
17	DISC HOLDER
18	BODY
19	GASKET
20	GUIDE CAP