

Thompson Valves Ltd.

**Installation, Operations
and
Maintenance Instructions.**

MI0354

REVISION 1

Type J20 (Model 822)
Spring Loaded Regulator

CONTENTS

Para.

General Information1-4

SECTION ONE

Pressure Reducing Valve (Type J20) – Model No. 822.....5

Figure 1

SECTION TWO

Relief Valve (Type P10).....6

Figure 2

WARNING – THE PRESSURES EMPLOYED IN THIS EQUIPMENT ARE SUFFICIENTLY HIGH TO ENDANGER HUMAN LIFE. EVERY REASONABLE PRECAUTION HAS BEEN OBSERVED IN DESIGN TO SAFEGUARD THE OPERATING PERSONNEL. UNAUTHORISED PERSONNEL SHOULD BE PROHIBITED FROM TAMPERING WITH THIS EQUIPMENT.

GENERAL NOTES

These instructions apply only to the J20 type of regulator.

Maximum inlet pressure 3000psi (207bar)

Outlet ranges 0-10psi, 0-30psi, 0-150psi depending on load spring fitted.

Cv= 0.025 Valve dia. 1/16”

These instructions are intended for use with the basic type J20 regulator fitted with a relief valve.

It is assumed that the system into which this valve is to be set is provided with adequate isolation and safety devices relevant to the media being processed.

1.0 DESCRIPTION

- 1.1 This valve design incorporates a valve capsule assembly (see figure 1 item 3) which can easily be removed and replaced should failure occur. The capsule includes a filter disc for air or inert gas applications, or a perforated metal disc for liquid applications. Gauge ports depending on customers requirements are provided for registering both inlet and outlet pressures.
- 1.2 Adjustment of outlet pressure can be achieved by turning the handknob (item 22) clockwise to increase outlet pressure and anti-clockwise to decrease outlet pressure. This action increases or decreases load on the main spring (item 6). As the valve is of the non self venting type, the down stream pressure must be vented in order to reduce regulator set pressure.
- 1.3 The valve pressure sensing is an elastomer diaphragm (item15).

2.0 INSTALLATION

2.1 Ensure that the valve is installed correctly in the pressure line. An arrow on the underside of the body indicates direction of flow.

2.2 Ensure that the requirements of this Installation Manual are satisfied.

3.0 MAINTENANCE

3.1 Whilst the valve, under normal operating conditions, will function for long periods without maintenance, for the highest standard of maintenance we would, however, recommend the renewal of all rubber components and main valve springs every five years.

4.0 FAULT DIAGNOSIS

	<u>Effect</u>	<u>Cause</u>	<u>Remedy</u>
1.	Drastic fall in outlet pressure (under flow conditions)	Blocked filter	Replace valve assembly capsule
2.	Rise in outlet (under static flow conditions)	Dirty or damaged valve or seat	Replace valve assembly capsule
3.	Leaking through housing (vent hole)	Ruptured diaphragm	Replace diaphragm
4.	No outlet pressure valve (under static flow conditions)	(a) Blocked filters	(a) Replace assembly capsule
		(b) Broken main spring	(b) Replace main spring

5.0 PROCEDURE FOR GAINING ACCESS TO VALVE ASSEMBLY AND DIAPHRAGM

IMPORTANT:

ENSURE THAT THE VALVE IS COMPLETELY VENTED OF PRESSURE BEFORE REMOVING FROM LINE.

Typical example of Type J20 assembly, see figure 1.

- 5.1 Unscrew spring housing (item 5) from valve body (item 1). The diaphragm (item 15) will now be exposed and can be removed. Inspect diaphragm for ruptures or tears and if found faulty replace and refit spring housing.
- 5.2 Removal of diaphragm will now expose valve capsule assembly (item 7) which can be unscrewed and removed from body. If the valve fault indicates the valve capsule assembly, fit new capsule and attendant sealing ring (item 14).
- 5.3 If the fault indicates a broken spring it will only be necessary to carry out para. 5.1 to replace spring.

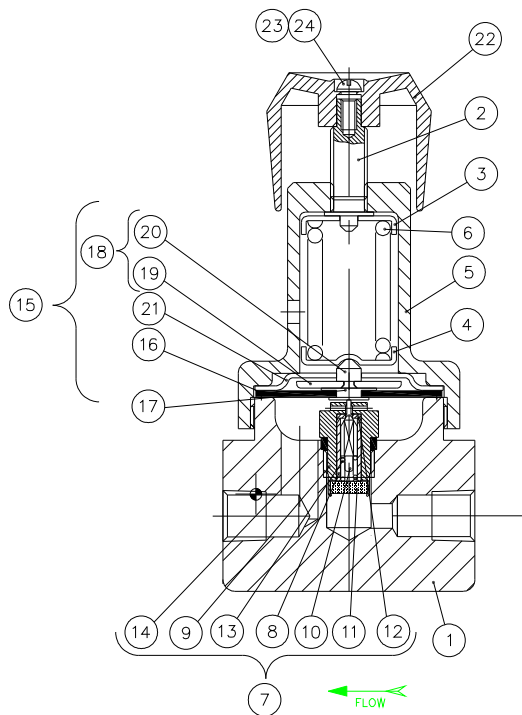


FIGURE 1

SECTION TWO

6.0 DESCRIPTION

This section covers the Type P10 Relief valve.

6.1 The relief valve unit situated on the side of the body can be unscrewed completely from the valve, relax all tension on relief spring before dismantling.

6.2 Adjust the relief valve by turning the inner spring adjuster (38) clockwise to increase the relief set pressure or conversely counter clockwise to decrease the set pressure setting.

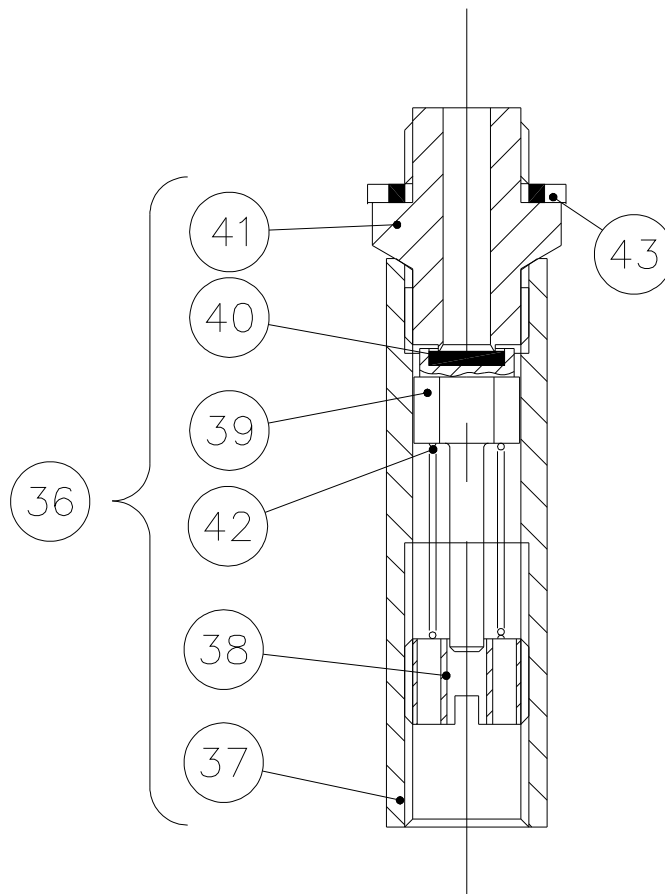


FIGURE 2