



**‘RG-1’ REGULATOR  
MODEL 8100  
OPERATION MANUAL  
MANUAL # OMP - 7700 - 07 - 04  
(SEE SPEC. SHEET 7700)**

**I. PRINCIPLE OF OPERATION**

The Ruelco ‘RG-1’ is a high pressure designed to give precise low pressure control of a high pressure signal. The stem and seat are protected by a 20 micron inlet filter. The soft seat design assures extended life and repeatability. The RG-1 also comes in a variety of outlet configurations.

**II. INSTALLATION**

The ‘RG-1’ can be mounted either vertically, horizontally, or supported by piping from any of its ports. If it is supported by piping, care should be taken that the strength of the pipe fittings used is adequate to prevent the fitting from breaking off in the valve body should the valve be inadvertently struck.

Proper pipe thread sealant should be used on any pipe fittings threaded into the valve ports. If stainless steel fittings are used, a sealant that will prevent galling is required.

Every Regulator has a panel mount thread designed into the cap to aid in panel mounting.

**III. DISASSEMBLY (REFER TO SPEC. SHEET 7700)**

**All Pressure should be vented before Disassembly**

- 7/8” Hex Socket
- Pick to remove debris

Note: All Item Numbers Refer to the 7700-11000 Model unless otherwise Noted.

**Cap Internals**

- 1) To replace O-rings on the Piston (Item 8) and Spring Plate (Item 4) spool assembly (Item 4), simply unscrew the Cap (Item 7) from the Body (Item 20).
- 2) Remove the Piston (Item 8) and replace O-ring (Item 15).
- 3) To remove the Spring Plate (Item 4), the Spring (Item 6) must be removed.
- 4) Press down on the Spring Plate (Item 4) and lift the Spring Plate out of the Cap (Item 7).

**Body Internals**

- 1) Using the 7/8” Hex socket, unscrew the Retainer (Item 9) and remove the Retainer and Spool (Item 14).
- 2) Remove the Sleeve (Item 12) from the Hex Retainer (Item 9). The Sleeve Seal o-ring (Item 11) can now be replaced.

- 3) The Retainer Seal o-ring (Item 10) can also be removed and replaced.
- 4) Remove the old Seal (Item 17) and carefully place the new one in the groove. The metal side of the seal should be orientated as shown in the cut sheet. Aimed away from the Sleeve (Item 12)
- 7) Install the Sleeve into the body making sure that the Spool fits thru the Retainer cleanly. Screw the Retainer until tight.
- 8) Lubricate the Inside of the Body in the piston bore and place the Piston into the bore

#### **IV. REPAIR AND ASSEMBLY**

- 1) Remove all of the seals Cap and Body.
- 2) Using an appropriate safety solvent, clean all parts.
- 3) Inspect the shaft assembly for any major damage such as burrs, knicks. Also, inspect it for straightness. Replace the shaft assembly if damaged.
- 4) Examine the body for any damage such as burrs, nicks, etc. Replace if damaged.
- 5) Replacement seals for a Ruelco product repair kit are required for proper valve performance. It is recommended that all seals be lubricated before and after installation with a high quality silicon based grease.
- 6) Place the Sleeve (Item 12) into the Retainer (9) as shown in cut sheet. Place the Spool (Item 14) into the Spool Spring (Item 13) inside the Body (Item 20).
- 9) Place the Spring on the piston, and with the spring plate installed in the Cap, thread the Cap onto the Body.

## **V. RECOMMENDED MAINTENANCE**

### **PROCEDURE**

Operate Manually.  
Disassemble, inspect and lubricate.  
Replace all seals.

### **INTERVAL**

Every 30 days.  
Yearly or as required.  
Every two (2) years or as required.