



**‘RD-1’ DUMP VALVE
MODEL 8001
OPERATION MANUAL
MANUAL # OMP - 8001 - 06 - 11
(SEE SPEC. SHEET 8001)**

I. PRINCIPLE OF OPERATION

The Ruelco ‘RD-1’ is a 2-way, Normally Open Hydraulic Controller that acts as a snap acting vent valve on loss of pilot pressure. This configuration of the Ruelco RD-1 permits control of hydraulic pressure up to 10,000 psi. A pilot supply of 100 psi. is necessary to control 10,000 psi. of hydraulic pressure. A high ratio of hydraulic pressure to pilot control pressure ensures safe operation. A soft seal design ensures zero leakage in the hydraulic section. Ruggedly constructed stainless steel process wetted parts provide years of reliable service and the compact and simple design makes field maintenance easy.

II. INSTALLATION

The ‘RD-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.

III. DISASSEMBLY (REFER TO SPEC. SHEET 8001)

All Control and Pilot Pressure should be vented before Disassembly

- Suitable adjustable wrench for removing the Hex Plug
- Pick to remove o-rings

Note: All Item Numbers Refer to the 8001 Model unless otherwise Noted.

Spool Seals

- 1) To replace O-rings on the spool assembly (Item 1), the cap must be removed.
- 2) Unthread the Cap (Item 1).
- 3) Pull the Spool and Piston (Item 9 and 4) out of the Cap. Be careful not to lose the spring.
- 4) The seals on the Piston and Spool seals may now be replaced as per instructions given in the repair section of this manual.

Body Seals

- 1) Unthread the Hex Plug (Item 13)
- 2) Using the pick, insert the pick into the Body, being careful not to

damage the inside edges and remove the Polypak Seal (Item 10) out of the body.

- 3) Now, also using the pick, remove the Hex Plug seals (Items 11 and 12).

IV. REPAIR AND ASSEMBLY

- 1) Remove the seals from the Spool assembly, Body, and Hex Plug
- 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 valve body for any damage such as burrs, nicks, etc. Replace if damaged.
- 5) Examine the Polpak Seal (Item 10) and replace if damaged. The Center seal can be removed with the pick. Insert the new seal into the cavity. Most of the seal should fall in easily. The Hex plug will finish completely seating the seal.
- 6) 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 included in the repair kit.
- 7) Lubricate the inside of the Body (Item 8). Replace the Polypak Seal (Item 10).

- 8) Install the Hex Plug into the body making sure that the Polypak Seal is also orientated upward.

- 9) Replace the Spool and Piston o-rings.

- 10) Finally, install the spring into the Body and place the spool and piston into the body. Screw the Cap back into place.

VI. 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.