



**'RQ-1' QUICK
EXHAUST
MODEL 1801
OPERATION MANUAL
MANUAL # OMP - 1801 - 19 - 02
(SEE SPEC. SHEET 1801)**

I. PRINCIPLE OF OPERATION

The Ruelco 'RQ-1' is a high pressure quick exhaust valve used to operate large hydraulic pistons by quickly venting cylinder hydraulic pressure through the bleed port for fast action. Loss of upstream hydraulic pressure moves the spool assembly, resulting in rapid exhaust of cylinder pressure. Re-supply of upstream pressure moves the spool assembly; resulting in resealing of the bleed port and thereby reopening the cylinder.

II. INSTALLATION

The 'RQ-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 1801)

- Suitable adjustable wrench for removing the cap.

- Pliers to remove the spool assembly from the body and seat from spool.

- 1) To replace O-rings on the spool assembly (Item 7), the valve has to be completely disassembled.
- 2) Unthread the cap (Item 1).
- 3) Use the pliers to pull the spool assembly (Item 7) out.
- 4) The seals on the spool assembly may now be replaced as per instructions given in the repair section of this manual.
- 5) Using pliers remove the retaining ring (Item 12). Next, remove the seat (Item 11) and remove the ball (Item 5) and the spring (Item 6).

IV. REPAIR AND ASSEMBLY

- 1) Remove the seals from the spool assembly and the body O-Ring (Item 2) from the cap.
- 2) Using an appropriate safety solvent, clean all parts.
- 3) Inspect the shaft assembly for any major damage such as burrs, nicks. 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 ball (Item 5) and seat (Item 10) and replace if worn-out.
- 6) Replacement seals from a Ruelco product repair kit are required for proper valve performance. Lubricate all seals before and after installation with high quality silicon base grease.
- 7) Lubricate the body O- Ring (Item 2) and install on the body (Item 8).
- 8) Lubricate the Spool O-ring (Item 9), and the back-up rings (Item 11), then install on the spool assembly.
- 9) Lightly lubricate the bores in the valve body (Item 8).
- 10) Lubricate the seat O- ring (Item 4) and install on the seat (Item 10).
- 11) Push the spring (Item 6) followed by the ball (Item 5) inside the spool (Item 7) and place the seat (Item 11) onto the spool then secure with retainer ring (Item 12)
- 12) Push the spool-assembly (Item 7) inside the valve body (Item 8).
- 13) Thread the cap (Item 1) onto the valve body (Item 8).

V. RECOMMENDED MAINTENANCE

PROCEDURE

Operate Manually

Disassembly, Inspect,
And lubricate

Replace all seals

INTERVAL

Every 30 days

Yearly or as
required

Every two(2)
Years or as required

