

OPERATION AND MAINTENANCE

MODEL 907 UNLOADER VALVE

The model 907 unloading valve uses a low control pressure to shut off a high-pressure line such as on the discharge of a compressor. When control pressure is released the valve opens. A minimum of 70 PSI control pressure is required to operate the valve at 6000 PSI. Control pressures up to 5000 PSI can be used without affecting operation or damaging the valve. One application for the valve is to unload a compressor upon shutdown. Interstage pressure could be used as the control pressure.

SPECIFICATIONS

- Maximum rated press. 6000 PSI
- Maximum control press. 5000 PSI
- Minimum cont. press. - 70 PSI at 6000 PSI inlet
50 PSI at 4000 PSI inlet
25 PSI at 2000 PSI inlet
- Flow capacity Cv = 0.1
.06" orifice
- Inlet filtration 90 micron
- Materials seals Delrin
body Viton
internals aluminum
brass,
stainless
- Ports inlet 1/4" MNPT
outlet to ambient
control 1/4" MNPT
- Size 1.5" dia. x
3.5" long

INSTALLATION

Connect the high pressure line to be unloaded to the valve end with the 1.37" hex. Connect the control pressure source to the opposite end. The outlet vents to atmosphere via the side holes in the body. Use a suitable pipe thread sealant such as Teflon tape on inlet and outlet threads. Avoid over torquing pipe thread. Normal torque applied with a 6 or 8 inch long wrench is ample. Use ample Teflon tape - 3 or 4 turns, not 1 or 2 turns. The regulator is NOT shipped oxygen clean and should NOT be used for oxygen service as provided. Consult the factory for details on oxygen service.

OPERATION:

The valve provides a fully automatic drain and unloading sequence and operates unattended.

MAINTANENCE:

No routine maintenance is required. If the drain and unloading becomes slower, cleaning of the 90 micron internal filter may be required. In this case the valve can be disassembled and reassembled by a qualified valve repair person following the drawing and notes herein. If time allows or a spare is available it is recommended the valve be returned to the factory for repairs.

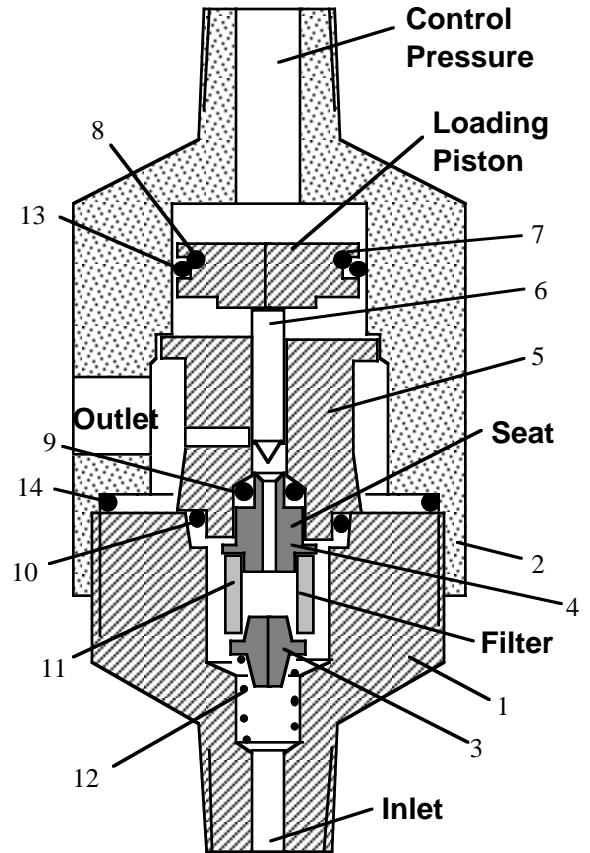
AQUA ENVIRONMENT CO. INC.,

ASSEMBLY & DISASSEMBLY - 907 UNLOADER

| ITEM | QTY | PART NO. | DISC. |
|------|-----|----------|--|
| 1 | 1 | 1108 | body (was 885a) |
| 2 | 1 | 1107 | cap (was 909a) |
| 3 | 1 | 887 | plug (note 5) |
| 4 | 1 | 910 | seat |
| 5 | 1 | 911 | housing |
| 6 | 1 | 912 | pin |
| 7 | 1 | 913 | piston |
| 8 | 1 | 907-8 | seal, 2-015-75V (note 6) |
| 9 | 1 | 907-9 | seal, 2-006-90V |
| 10 | 1 | 907-10 | seal, 2-014-90V |
| 11 | 1 | 907-11 | filter, (90μ) |
| 12 | 1 | 907-12 | spring, |
| 13 | 1 | 907-13 | seal, 2-016-90V |
| 14 | 1 | 883-14 | seal, 2-211-75 buna (note 7) |
| 15 | 1 | 907-14 | REPAIR KIT – includes items 4, 6, 8, 9, 10, 11, 13, 14 |

NOTES:

1. Technical bulletin - 881
2. Use Dow grease #4 on threads and seals. (This light grease permits required easy movement of piston.)
3. To assemble, install spring in body. Install seal 9 then seat 4 in housing 5. Install seal 8 and 13 on piston 7 (see note 6). Install piston in cap 2. Install pin 6 in item 5. Install housing 5 in cap 2. Install seal 14 in cap 2. Install filter 11 and plug 3 on seal 4 (see note 5). Insure filter 11 and plug 3 fit snug. Screw cap 2 with internal parts onto body 1. Hold upright to prevent spring from falling out. Torque to 5 to 10 ft lbs.
4. Delete this note.
5. Install item 3 with pointed end downward as shown.
6. Cut O ring item 8 through and install on deeper groove in item 7. Insure there is slight crack at cut end so O ring cannot seal (Its purpose is to serve as an expander for seal item 13.)
7. Item 14 provides a housing seal. (Earlier models with deeper bore in cap use two 2-118 O rings and ring part number 1172 as shown at right in place of item 14.)



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