

# OPERATION AND MAINTENANCE MODEL 1310 BACK PRESSURE REGULATOR

## GENERAL

Also known as a priority valve, the model 1310 is a fully balanced, economical regulator. It serves a wide variety of uses, however its main use is on small compressors. The regulator will improve moisture separator efficiency and filter life as much as 450%. This is done by maintaining pressure in the separator and filter at about 1800 PSI when tank pressure is lower.

## SPECIFICATIONS

- Maximum rated pressure - 6000 PSI (40 MPa)
- Set pressure - 1900 PSI (non-adjustable)
- Materials - Anodized aluminum body, brass, stainless steel, Viton seals
- Flow capacity - 1 to 10 SCFM
- Leakage - Zero external; 0.05 SCFM internal
- Ports - 1/4" FNPT inlet; 1/4" MNPT outlet
- Size - 1" hex by 2.4" long

## INSTALLATION

Use a suitable pipe thread sealant such as Teflon tape on the inlet and outlet ports. Connect the inlet to the source gas such as a compressor. 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

In operation the back pressure regulator will maintain its set pressure upstream and allow just enough gas flow to hold this pressure. Set pressure is pressure at the inlet port when gas is flowing through the regulator. The gauge connected to the outlet gauge port does not read set pressure. It reads pressure of the tank being filled down stream of the regulator.

## MAINTENANCE & REPAIR

Routine maintenance is generally not required. Under extended or severe operation it is helpful to re lubricate the poppet seal item 10. (see drawing on opposite side). To disassemble, remove cap 2 from body 1. Internal parts (items 3, 4, 5, 8, 9, 10, 11, 12) can then be removed by inserting a small rod in outlet and pushing parts out. The seat (item 6) can be removed from the cap using a straight blade screwdriver. Use a magnifying glass to inspect the seat sealing area for damage. Replace damaged items. To reassemble, install lower seal 9 in body, install upper item 9 and seal 10 on guide 3 then insert into body 1. Fully pack area between the guide and seal (item) 10 with grease. Use Cristo-Lube MCG 121 grease or equivalent. Install seal 8 on cap 2 then screw into body. Assemble items 4, 5, 11, and 12. Use grease (MCG 121) between 4 and 5 to hold sub-assembly together. Insert this sub-assembly into cap then install seal 7 on seat 6 and screw into cap. Be sure poppet item 5 is centered to avoid damaging seal 10.

Access leakage can occur internally between the inlet and outlet resulting in a drop in set pressure. This is generally due to dirt or other particulates damaging the seat 6.

A repair kit consisting of seat, poppet, and seals (part number 1310-13) is available.

**IN ALL CASES THE UNITS CAN BE RETURNED TO THE FACTORY OR DEALER FOR REPAIR.**

**ASSEMBLY AND DISASSEMBLY**

Assembly and disassembly can be done by following the following drawings and parts list. Also refer to the repair section on the opposite side of this sheet for disassembly sequence.

**PARTS LIST - 1310 BACK PRESSURE REGULATOR**

ITEM	QTY	PART NO.	DESCRIPTION
1	1	1315	body
2	1	1316	cap
3	1	1317	guide
4	1	1331	sleeve
5	1	1319	poppet
6	1	1318	seat
7	1	2-010	O ring 90V
8	1	2-014	O ring 90V
9	2	2-012	O ring 90V
10	1	2-004	O ring 90V
11	1	1333-11	ball
12	1	1333-12	spring
			C0300-042-0560S see note 6
13		1310-13	repair kit note 4

**NOTES**

1. Fully pack area between items 5 and 10 with Cristo-Lube MCG 121 or equiv.
2. Use light coat of Dow 111 grease on items 7, 8 and 9.
3. Set pressure is non-adjustable and is between 1600 to 2400 PSI.
4. Repair kit includes items 6, 7, 8, 9 (2 ea), 10, 5, and 12.
5. Tech Bul. 1309, test 1333, tools 1332
6. For 1310-1600 model use C0300-040-0560S

