



## **GV-625 Service Instructions**

### ***I. Introduction***

BV-625 is a two stage mechanical gate valve. Basic operation of the device involves turning the handle 1½ turns CCW to open the internal pilot valve. Doing so allows pressure in the system downstream of the valve to equalize with the pressure inside the CAS cylinder within several seconds. The valve handle can then easily be turned another 5 turns CCW to open the main section for maximum flow capability/minimum pressure drop. Closing the valve can easily be accomplished by turning the valve handle CW approximately 6 ½ turns.

Providing reasonable care and cleanliness standards are maintained, the valve should provide many years of trouble free operation. Should the need for disassembly and inspection and/or maintenance be required, the following instructions are provided to guide you through the necessary steps. Refer to Figure 1 and Table I for a complete listing of Bottle Valve components.

### ***II. Disassembly***

1. Remove the Bottle Nut using a 1¼-in wrench.
2. Remove the Nut Cover using a small screwdriver or pick.
3. Remove the ¼-20 Nut that secures the Handle to the Valve. Remove Handle.
4. Remove the Bonnet Assembly using CAS tool P/N WR-BV625-1. The Plunger Shaft will likely come out with Bonnet. If so, remove the Plunger Shaft from the Bonnet and insert it back into the square socket of the Stem Assembly.
5. Remove the Stem Assembly by turning CCW with the Plunger Shaft.

### ***III. Inspection***

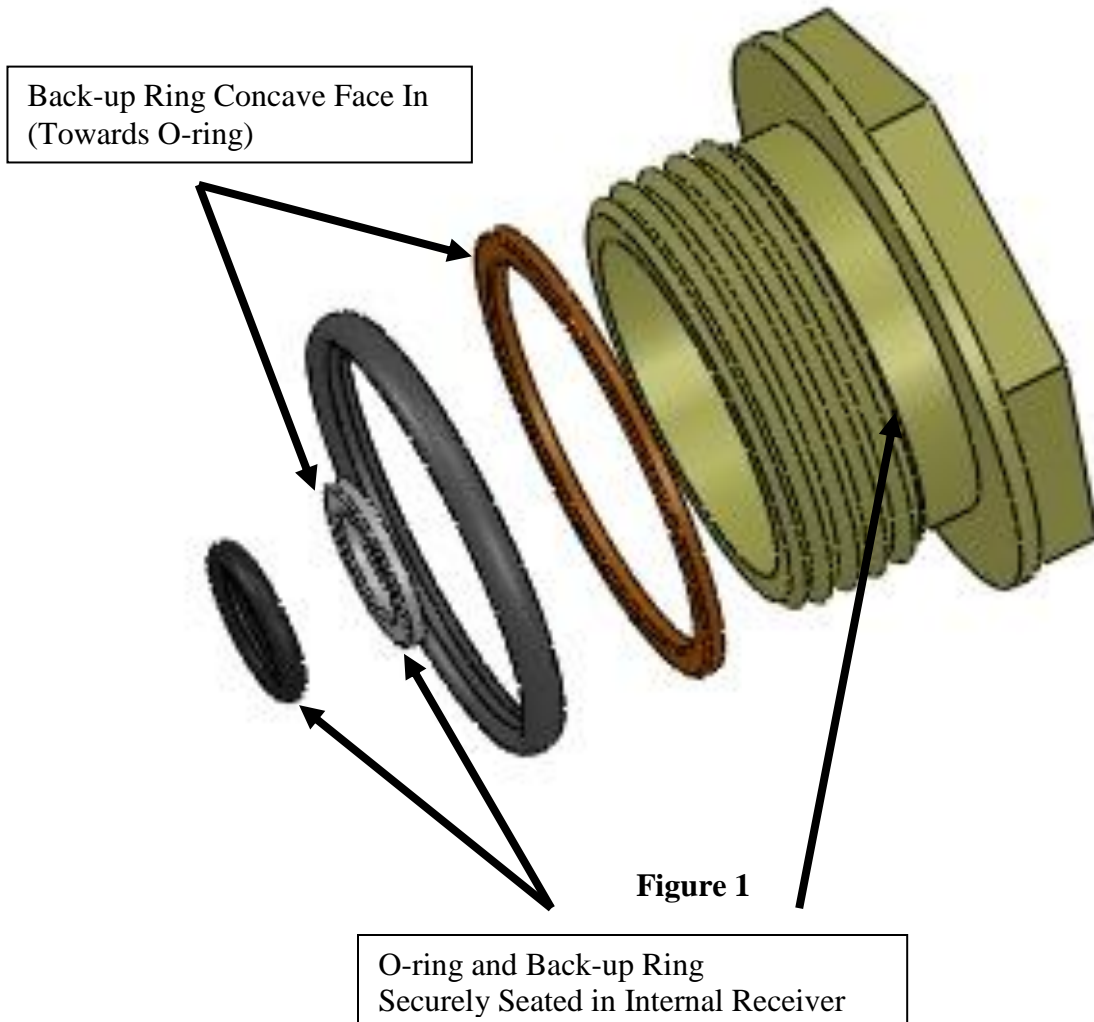
1. Examine internal components for signs of damage or debris.
2. Clean components using a mild solvent and dry with compressed air.
3. Replace damaged or worn components.

### ***IV. Re-assembly***

1. Coat threads of Stem assembly with Krytox or similar Oxygen compatible lubricant.
2. Lubricate O-rings with Parker Super O-Lube.
3. Thread Stem assembly into Valve Body using Plunger shaft.

#### **IV. Re-assembly Cont'd**

4. Coat threads of Stem assembly with Krytox or similar Oxygen compatible lubricant.
5. Lubricate O-rings with Parker Super O-Lube.
6. Thread Stem assembly into Valve Body using Plunger shaft.
7. If new O-rings and Seals were purchased, install Plunger Shaft Back-up Ring and O-ring in Bonnet as per Figure 1.



**Figure 1**

8. Install O-ring and Packing seal on Bonnet.
9. Thread Bonnet into Valve Body and secure with CAS tool P/N WR-BV625-1.
10. Install Handle using  $\frac{1}{4}$ -20 Nut and Washer.
11. Install Nut Cover.
12. Install O-rings in outlet face of Valve Body and outlet face of Bottle Nut.
13. Thread Bottle Nut on to Valve Body and secure.

