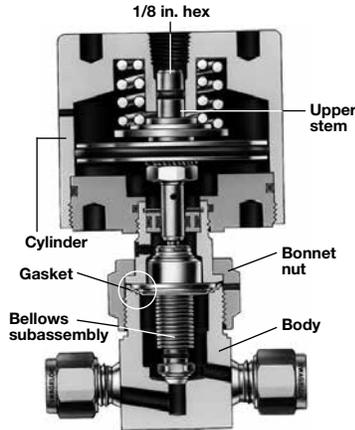


Swagelok

### HB Series Pneumatically Actuated Valve NORMALLY CLOSED Model Bellows Subassembly and Gasket Replacement Instructions



#### To Replace Bellows Subassembly and Gasket

1. Pressurize the actuator to the **OPEN** position with 80 psig (5.6 bar).
2. Unscrew **bonnet nut** using a 1 1/8 in. open-ended wrench.
3. Remove valve upperworks from **body**.
4. Relieve the pressure.
5. Remove **gasket** from body and discard gasket.
6. Unscrew **bellows subassembly** with a 5/16 in. (or 8 mm) nut driver. Use a 1/8 in. hex wrench to hold the top of **upper stem** (accessible through air inlet port).
7. Screw new bellows subassembly into the upper stem using a 5/16 in. (or 8 mm) nut driver. Hold the top of the upper stem stationary with a 1/8 in. hex wrench and tighten the bellows subassembly to 8 to 10 in-lb (0.9 to 1.1 N-m). **Do not tighten beyond 10 in-lb (1.1 N-m) and do not bend the assembly.**
8. Place new gasket into body, then place valve upperworks on body.
9. Screw bonnet nut, by hand, onto body.
10. Pressurize the actuator with 30 psig (2.1 bar).
11. Screw bonnet nut further, by hand, until it is snug. **Note:** Hold valve in the vertical position during tightening.
12. Tighten bonnet nut to 450 in.-lb (50.9 N-m). **Note:** Hold valve body and **cylinder** stationary during tightening of bonnet nut

13. Relieve the pressure.
14. Test valve and actuator to ensure proper operation and leak-tight shutoff.

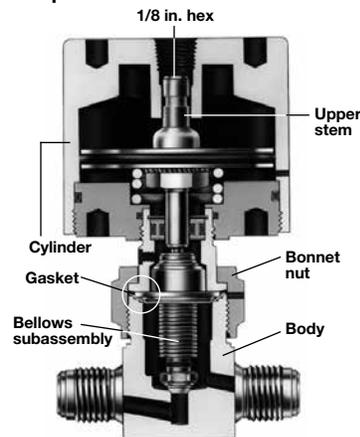
#### To Replace Gasket ONLY

1. Pressurize the actuator to the **OPEN** position with 80 psig (5.6 bar).
2. Unscrew **bonnet nut** using a 1 1/8 in. open-ended wrench.
3. Remove valve upperworks from **body**.
4. Remove **gasket** from body and discard gasket.
5. Relieve the pressure.
6. Place new gasket into body.
7. Screw bonnet nut, by hand, onto body.
8. Pressurize actuator with 80 psig (5.6 bar).
9. Screw bonnet further, by hand, until it is snug. **Note:** Hold valve in the vertical position during tightening.
10. Tighten bonnet nut to 450 in.-lb (50.9 N-m). **Note:** Hold valve body and **cylinder** stationary during tightening of bonnet nut by using a cylinder spanner wrench or similar tool.
11. Relieve the pressure.
12. Test valve and actuator to ensure proper operation and leak-tight shutoff.

© 1985-2023 Swagelok Company

Swagelok

### HB Series Pneumatically Actuated Valve NORMALLY OPEN Model Bellows Subassembly and Gasket Replacement Instructions



#### To Replace Bellows Subassembly and Gasket

1. Unscrew **bonnet nut** using a 1 1/8 in. open-ended wrench.
2. Remove valve upperworks from **body**.
3. Remove **gasket** from body and discard gasket.
4. Insert a 1/8 in. hex wrench into socket located at bottom of air inlet port of **cylinder**.
5. Push down on the hex wrench to release tension on **bellows subassembly**. Maintain this pressure during Steps 6 and 7.
6. Unscrew bellows subassembly with a 5/16 in. (or 8 mm) nut driver.
7. Screw new bellows subassembly into the upper stem using a 5/16 in. (or 8 mm) nut driver. Hold the top of the upper stem stationary with a 1/8 in. hex wrench and tighten the bellows subassembly to 8 to 10 in-lb (0.9 to 1.1 N-m). **Do not tighten beyond 10 in-lb (1.1 N-m) and do not bend the assembly.**
8. Place new gasket into body, then place valve upperworks onto body.
9. Screw bonnet nut onto body by hand until it is snug. **Note:** Hold valve in the vertical position during tightening.
10. Pressurize the actuator with 50 psig (3.5 bar).
11. Screw bonnet nut further, by hand, until it is snug. **Note:** Hold valve in the vertical position during tightening.

12. Tighten bonnet nut to 450 in.-lb (50.9 N-m). **Note:** Hold valve body and **cylinder** stationary during tightening of bonnet nut by using a cylinder spanner wrench or similar tool.
13. Test valve and actuator to ensure proper operation and leak-tight shutoff.

#### To Replace Gasket ONLY

1. Unscrew **bonnet nut** using a 1 1/8 in. open-ended wrench.
2. Remove valve upperworks from **body**.
3. Remove **gasket** from body and discard gasket.
4. Place new gasket into body, then place valve upperworks on body.
5. Screw bonnet nut, by hand, onto body. **Note:** Hold valve in the vertical position during tightening.
6. Tighten bonnet nut to 450 in.-lb (50.9 N-m). **Note:** Hold valve body and **cylinder** stationary during tightening of bonnet nut by using a cylinder spanner wrench or similar tool.
7. Test valve and actuator to ensure proper operation and leak-tight shutoff.

[www.swagelok.com](http://www.swagelok.com)

MS-CRD-0023, RevG, January 2023

