

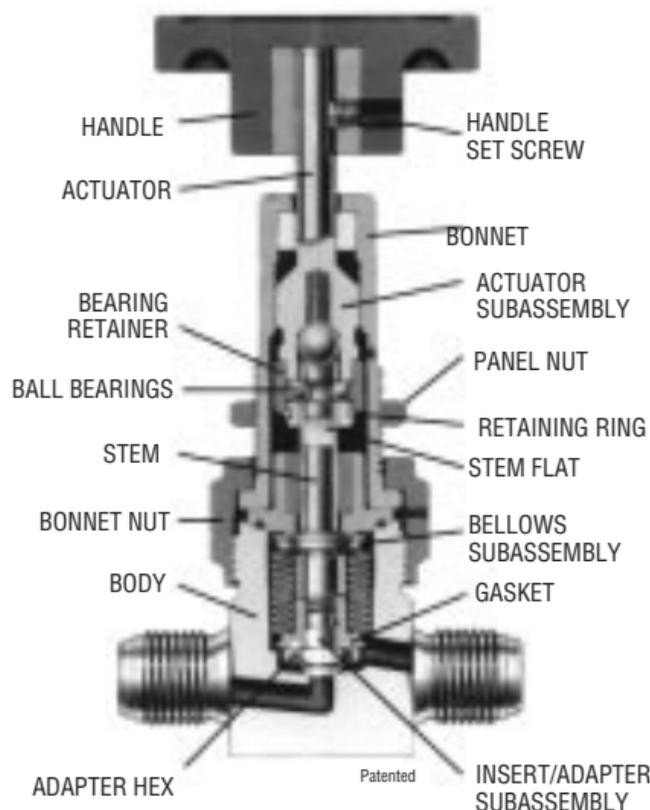
REPLACEMENT INSTRUCTIONS – “BN” SERIES MANUALLY ACTUATED BELLOWS SEALED VALVES

INSERT / ADAPTER KIT

1. With valve OPEN, thread **panel nut** to top of **bonnet** threads.
2. Loosen **handle set screws** (2) with 5/64" hex wrench, and remove **handle** from **actuator subassembly**.
3. Unscrew **bonnet nut** with 1-1/8" open-end wrench, and remove valve upperworks from **body**.
4. Unscrew **bonnet** from **actuator/bellows subassembly**.
5. With 3/16" open-end wrench on **stem flat** and 3/8" open-end wrench on **adapter hex**, unscrew **insert/adaptor subassembly** from **stem**; discard **insert/adaptor subassembly**.
6. Remove **gasket** from bottom of **bellows subassembly**, and replace with new **gasket**.
7. Thread new **insert/adaptor subassembly** into **stem**, and torque to 35 in.-lbs.
8. Thread **bonnet** onto new **actuator/bellows subassembly**.
9. Place valve upperworks on **body**, and thread **bonnet nut** onto **body**; With 1-1/8" open-end wrench, torque **bonnet nut** to 500 in.-lbs.
CAUTION: Do not rotate **body** (may damage bead seal on bellows subassembly).
10. Place **handle** on **actuator subassembly**, and align **set screw** holes (2) with **actuator subassembly** flats (2); tighten **handle set screws** with 5/64" hex wrench.
11. Test valve to ensure proper operation and sealing.

BELLOWS / INSERT / ADAPTER KIT

1. With valve OPEN, thread **panel nut** to top of **bonnet** threads.
2. Loosen **handle set screws** (2) with 5/64" hex wrench, and remove **handle** from **actuator subassembly**.
3. Unscrew **bonnet nut** with 1-1/8" open-end wrench, and remove valve upperworks from **body**.
4. Unscrew **bonnet** from **actuator/bellows subassembly**.



© 1990 Swagelok Co., all rights reserved

5. Remove **retaining ring** from **actuator/bellows subassembly** with screw driver blade.
6. Slide **bearing retainer** down to expose **ball bearings**, and carefully separate **bellows subassembly** from **actuator subassembly**.
7. Remove and retain **ball bearings** (3) and **bearing retainer**; discard **bellows subassembly**.
8. Place **bearing retainer** on stem of **new bellows subassembly**, and insert **bellows subassembly** into bottom of **actuator subassembly**.
9. Lubricate **ball bearings** with multi-purpose lubricant (enough to hold **ball bearings** in place), and place one **ball bearing** in each depression on **actuator subassembly**.
10. While pressing subassemblies together, slide **bearing retainer** up over **ball bearings**.
11. Replace **retaining ring** in groove below **bearing retainer** on **actuator / bellows subassembly**.
12. Thread **bonnet** onto new **actuator/bellows subassembly**.
13. Place valve upperworks into **body**, and thread **bonnet nut** onto **body**; With 1-1/8" open-end wrench, torque **bonnet nut** to 500 in.-lbs.
CAUTION: Do not rotate **body** (may damage bead seal on **bellows subassembly**).
14. Place **handle** on **actuator subassembly**, and align **handle set screw** holes (2) with **actuator subassembly** flats (2); tighten **handle set screws** with 5/64" hex wrench.
15. Test valve to ensure proper operation and sealing.

Printed in U.S.A.
6-90-5M-IP
MS-CRD-0037

Swagelok®
www.swagelok.com