

**!WARNING!**

Relieve all pressure from system before removing valve for service, and before any disassembly or repair.

Read and understand all instructions included with the repair kit, prior to starting any repairs.

**!NOTE!**

Numbers in brackets [ ] refer to the number in the valve component list. Numbers in parenthesis ( ) refer to the quantity of associated parts.

**!IMPORTANT!**

FOR ALL O-RING INSTALLATIONS BELOW, ENSURE THAT APPROPRIATE LUBRICATION IS APPLIED TO O-RING TO AID IN PROPER ASSEMBLY. MASK ANY THREADS THE O-RING WILL CONTACT PRIOR TO INSTALLATION, AND REMOVE MASKING AFTER O-RING IS INSTALLED.

## A. Disassembly

1. If you purchased a valve with an actuator attachment: remove (4) ¾" length Hex Head Bolts [3], Actuator Assembly [2], Drive Coupler [5], (4) 1" length Hex Head Cap Screws [6], (8) Actuator Split Washers [4], and Flat Actuator Bracket [7] from Body [1] and retain.
2. If you purchased a valve with a lever attachment: remove Snap Ring [8], Lever Washers [9 and 10], and Lever [11] from Gland Assembly [16] and retain.
3. Remove Cap Screw [12], Cam Split Washer [13], Cam Assembly [14], and Stub Washer [15] from end of Gland Assembly [16] and retain.
4. Remove Gland Assembly [16] from Body [1] and retain.
5. Discard Graphite Gland Seal [17] and Gland O-Ring [18].
6. Remove Gland Packing components:
  - 6.1 Remove and retain Gland Bonnet [16C] and Gland Stem [16A] from Gland Body [16E].

- 6.2 Remove and discard Wiper Seal [16B] and Gland Bushing [16D].
  - 6.3 Discard Graphite Packing Ring [16F], (3) V-Pack [16G], and Male Adapter [16H].
  - 6.4 Retain Packing Washer [16J], Ejection Spring [16K], and Packing Spring [16L].
7. Remove Main Valve Components:
    - 7.1 Remove and retain Cotter Pin [19] and Nylock Nut [20].
    - 7.2 Remove Valve Stem Assembly [23].
    - 7.3 Remove and discard Bleed Disc [21] and Stem O-Ring [22].
    - 7.4 Remove (8) Valve Poppet Screw [24E], (8) Lock Washer [24D], and Seal Retainer [24C] and retain.
    - 7.5 Remove Main Valve Seal [24B] and discard.
  8. Inspect Valve Body [1] and clean if necessary, be sure interior is free of dirt, residue, and foreign particles.

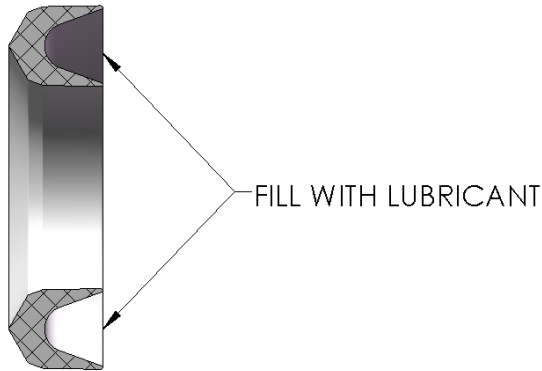
## B. Reassembly

1. Replace Main Valve Seal:
  - 1.1 Install new Main Valve Seal [24B] into Valve Poppet [24A].
  - 1.2 Install Seal Retainer [24C], (8) Lock Nut [24D], and (8) Valve Poppet Screw [24E]. **\*\*Torque Screws [24E] to 150 in/Lbs. ±10 in/Lbs.\*\***
  - 1.3 Install Valve Poppet Assembly [24] onto Stem Assembly [23]
  - 1.4 Apply Lubriplate or equivalent lubricant to Stem O-Ring [22] and install onto Stem Assembly [23].
  - 1.5 Install Bleed Seal [21] and Nylock Nut [20] onto Stem Assembly [23]. Tighten nut securely.
  - 1.6 Install Cotter Pin [19] into Stem Assembly [23].
2. Replace Gland seals:
  - 2.1 Install Gland Bushing [16D] into Gland Bonnet [16C].

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- 2.2 Apply Lubriplate or equivalent lubricant to Wiper Seal [16B] and install into Gland Bonnet [16C].
- 2.3 Fill (3) V-Pack [16G] with Lubriplate or equivalent lubricant.

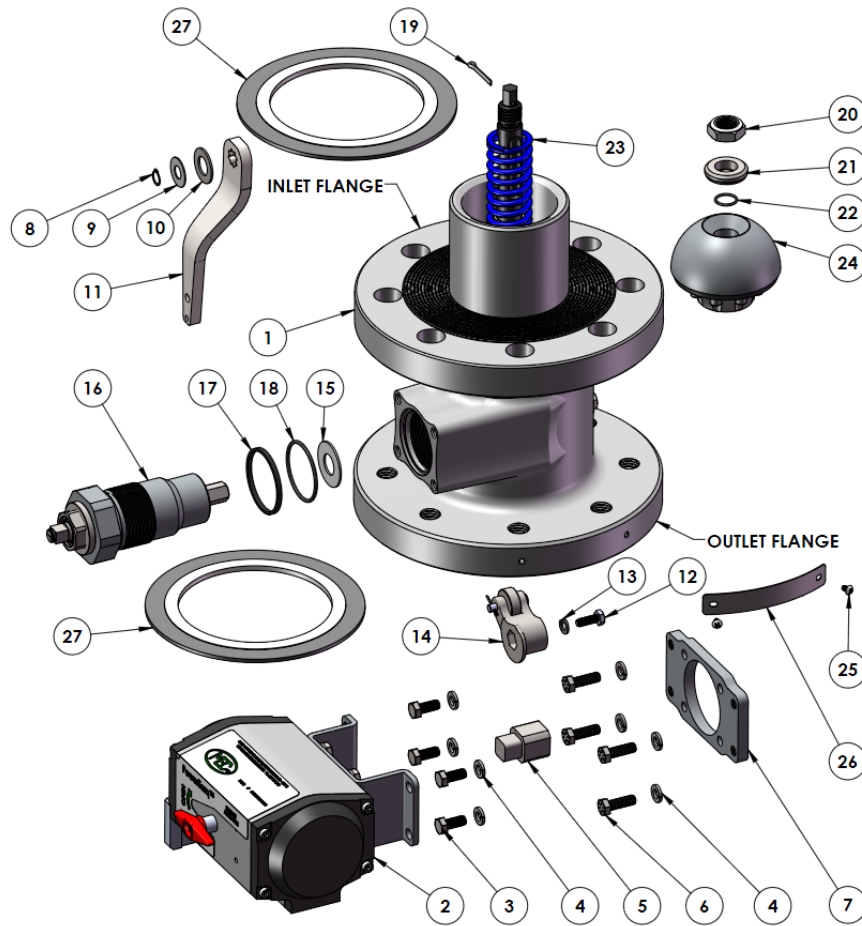


- 2.4 Install Male Adapter [16H], (3) V-Pack [16G], and Graphite Packing Ring [16F] onto Gland Stem [16A] and Packing Washer [16J].
- 2.5 Apply Loctite #242 to threads of Gland Bonnet [16C] and push Packing Ring [16F], (3) V-Pack [16G], and Male Adapter [16H] into Gland Body [16E] and tighten Gland Bonnet [16C] securely.
3. Apply Loctite #242 generously to threads of Gland Assembly [16] and install into Valve Body [1].  
Torque to **100 ft/Lbs.±10 ft/Lbs.**
4. If you removed a lever attachment: install Lever [11], Lever Washers [10 and 9], and Snap Ring [8] onto Gland Assembly [16].
5. If you removed an actuator attachment:
  - 5.1 Install (4) Actuator Split Washers [4] onto (4) 1" length Hex Head Cap Screws [6] and apply Loctite #242 to threads.
  - 5.2 Install Flat Actuator Bracket [7] onto Body [1] with (4) 1" length Hex Head Cap Screws [6] and tighten.
  - 5.3 Attach Drive Coupler [5] to Gland Assembly [16].
  - 5.4 Rotate Drive Coupler [5] clockwise by hand until it stops, then back off counterclockwise 1/8 turn (45°).

- 5.5 Position Actuator Assembly [2] with air inlet connection facing toward OUTLET FLANGE and install over Drive Coupler [5]. Install (4) Actuator Split Washers [4] onto (4) 3/4" length Hex Head Bolts [3]. Apply Loctite #242 to threads of (4) 3/4" length Hex Head Bolts [3] and install through bent bracket holes on Actuator Assembly [2] and thread into Flat Actuator Bracket [7], tighten.
6. If valve was removed from tank connection, reinstall valve using new Flange Gasket [27].
7. Connect the valve assembly OUTLET FLANGE to a pressure source of at least 150 PSI. Check for leaks at flange connection and gland seals using a suitable leak detector solution such as "Marshall Excelsior" leak detector.
8. **CAUTION: DO NOT USE THE VALVE IF ANY JOINT CONTINUES TO LEAK UNDER PRESSURE.**
9. If all seals and connections are leak free, connect valve OUTLET FLANGE to piping system using new Flange Gasket [27].

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16F. Graphite Packing Ring



## C. Component List

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| <ul style="list-style-type: none"> <li>1. Body</li> <li>2. Rotary Actuator Assembly</li> <li>3. 3/4" Length Hex Head Bolts (Qty. 4)</li> <li>4. Actuator Split Washer, (Qty. 8)</li> <li>5. Drive Coupler</li> <li>6. 1" Length Hex Head Cap Screw (Qty. 4)</li> <li>7. Flat Actuator Bracket</li> <li>8. Snap Ring</li> <li>9. Lever Washer (Small)</li> <li>10. Lever Washer (Large)</li> <li>11. Lever</li> <li>12. Cap Screw</li> <li>13. Cam Split Washer</li> <li>14. Cam Assembly</li> <li>15. Stub Washer</li> <li>16. Gland Assembly</li> <li>16A. Gland Stem</li> <li>16B. Wiper Seal</li> <li>16C. Gland Bonnet</li> <li>16D. Gland Bushing (Qty. 2)</li> <li>16E. Gland Body</li> </ul> | <ul style="list-style-type: none"> <li>16F. Graphite Packing Ring</li> <li>16G. V-Pack (Qty. 3)</li> <li>16H. Male Packing Adapter</li> <li>16J. Packing Washer</li> <li>16K. Ejection Spring</li> <li>16L. Packing Spring</li> <li>17. Graphite Gland Seal</li> <li>18. Gland O-Ring</li> <li>19. Cotter Pin</li> <li>20. Nylock Nut</li> <li>21. Bleed Seal</li> <li>22. Stem O-Ring</li> <li>23. Stem Assembly</li> <li>24. Valve Poppet Assembly</li> <li>24A. Valve Poppet</li> <li>24B. Main Valve Seal</li> <li>24C. Seal Retainer</li> <li>24D. Lock Washer</li> <li>24E. Valve Poppet Screw</li> <li>25. Nameplate Screw</li> <li>26. Nameplate</li> <li>27. Flange Gasket (Qty. 2)</li> </ul> |
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## COMPONENT LIST CONTINUED:

