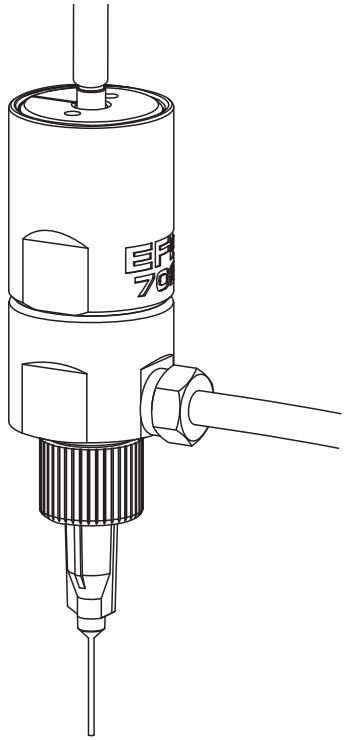
702 Series Diaphragm Valve

Maintenance & Parts Guide



To order 702V-SS Diaphragm Valve, refer to part #7020683.
To order 702M-SS Diaphragm Valve, refer to part #7020679.
To order 702V-A Diaphragm Valve, refer to part #7020680.
To order 702V-T Diaphragm Valve, refer to part #7013243.

IMPORTANT!
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Valve Disassembly and Reassembly Procedures

Fluid Body

1. Remove the fluid body from air cylinder by turning counter-clockwise until free.

   The diaphragm may loosen or become unthreaded from the piston rod when the fluid body is removed. If so, retighten or reinstall the diaphragm before reinstalling the fluid body.
2. To reinstall fluid body, turn clockwise onto air cylinder and torque to 8.1 – 10.8 Nm (6-8 foot pounds).

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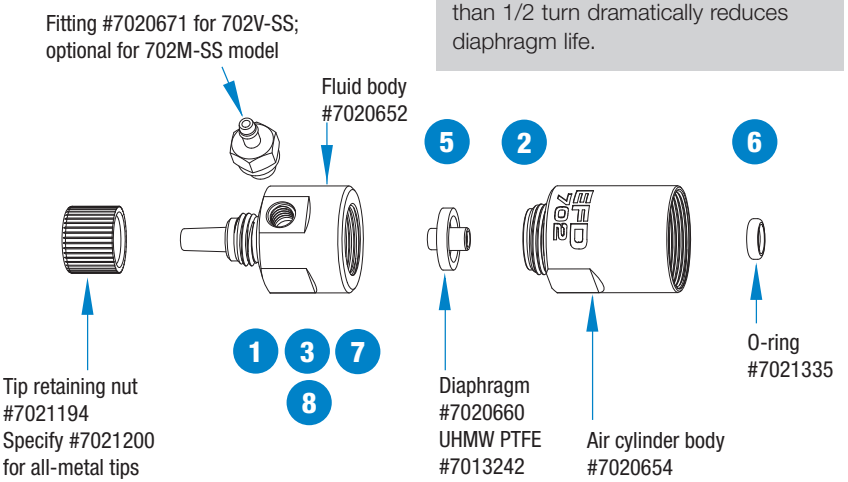
Diaphragm

3. Remove fluid body by unscrewing counterclockwise.
4. Place a small Allen wrench into throughhole located on piston barb. Hold Allen wrench to prevent piston from rotating.
5. Unscrew diaphragm by turning counterclockwise and remove from the piston rod.
6. Thread on the new diaphragm holding Allen wrench to prevent piston from rotating. Tighten slowly until diaphragm bottoms against piston rod.
7. Reinstall fluid body, turning clockwise onto air cylinder and torque to value specified in step 2.

Important Note: for PTFE Teflon® diaphragm - adjust stroke 1/2 turn open or less. Stroke settings greater than 1/2 turn dramatically reduces diaphragm life.



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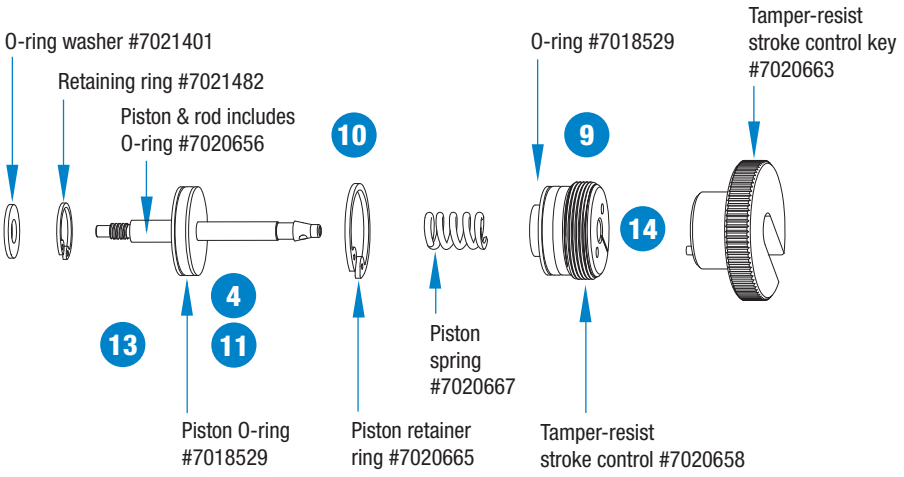
Piston O-ring and Cylinder

8. Remove fluid body and diaphragm.
9. Remove stroke control and spring by turning counterclockwise.
10. Remove the piston retainer ring.
11. Remove the piston.
12. Remove the cylinder O-ring retaining ring, washer and O-ring from inside the air cylinder.
13. Lubricate O-ring, pisiton shaft and air cylinder wall with Nye Lubricant #865. (#7023234)
14. Reinstall components in reverse order.

Tools required:

6" adjustable wrench (2)
6" needle-nose pliers
snap-ring pliers
tamper-resist stroke key (#7020663)



Troubleshooting Guide

No fluid flow

- If valve operating air pressure is too low, the valve will not open. Increase air pressure to 70 psi (4.8 bar) minimum.
- The reservoir air pressure may not be high enough. Increase pressure.
- The dispensing tip may be clogged. Replace tip.
- The stroke adjustment may be closed. Open stroke adjustment.
- Fluid may have solidified in the valve. Clean the fluid body.

Fluid drools after the valve closes, eventually stopping

- This is caused when air is trapped in the outlet section of the fluid body or the fluid has entrapped air. The air will expand after the valve closes, causing extrusion until the air reaches atmospheric pressure.

  Purge the valve by dispensing at a steady flow until clear. If a small tip is used, it may be necessary to remove the tip while purging to obtain sufficient flow to carry the air down through the tip adapter.
- If the fluid has entrapped air, the material must be degassed before dispensing.

Fluid drips at a steady rate after the valve closes

- A steady drip can be caused by excessive reservoir pressure. Check to be sure the reservoir pressure is not above 70 psi (4.8 bar).
- If the stroke adjustment knob is turned out more than two full turns, the reservoir pressure will force the diaphragm open. Check the stroke adjustment knob to be sure it is less than two turns out.
- A steady drip also indicates failure of the diaphragm to close fully due to particle build-up or wear. In either case, replace the sealing head in accordance with the maintenance instructions.

Fluid leaks out between fluid body and diaphragm

- Fluid leakage between the fluid body and the diaphragm indicates the fluid body is loose. Torque to proper specifications.

Fluid flows out of the drain hole

- Fluid flowing out of the drain hole indicates a ruptured diaphragm. Replace in accordance with the maintenance instructions.
- If using PTFE Teflon® diaphragm, verify stroke setting is 1/2 turn open or less. Greater than 1/2 turn open reduces diaphragm life.

Valve responds slowly when opening and closing

- Valve response is related to control air hose length and size. The 702V model valve is supplied with 5-feet of 3/32" ID tubing attached. Any additional length or size change will affect response time. Check to be sure the length and size have not been changed.

Inconsistent deposits

- Inconsistent deposits can result if the air pressure controlling the valve and/or supplying the reservoir is fluctuating or if the valve operating pressure is less than 70 psi (4.8 bar). Check to be sure air pressures are constant and the valve operating pressure is 70 psi (4.8 bar).
- The time the valve is open must be constant. Check to be sure the valve controller is providing a consistent output.

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USA & Canada: 800-556-3484 or +1-401-434-7000
Europe: 0800 585733 or +44 (0) 1582 666334
Asia: +86 (21) 3866 9006
technical@nordsonefd.com www.nordson.com