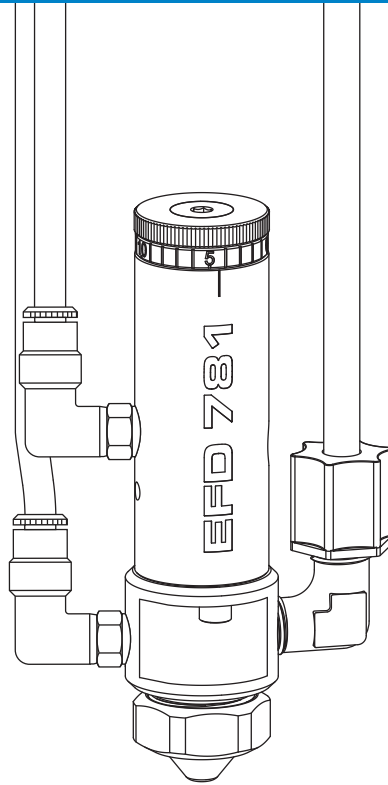


781S Series Spray Valves

Maintenance & Parts Guide



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Valve Disassembly and Reassembly Procedures

⚠ CAUTION

To prevent damage, the valve must be disassembled starting at the fluid outlet end of the valve.

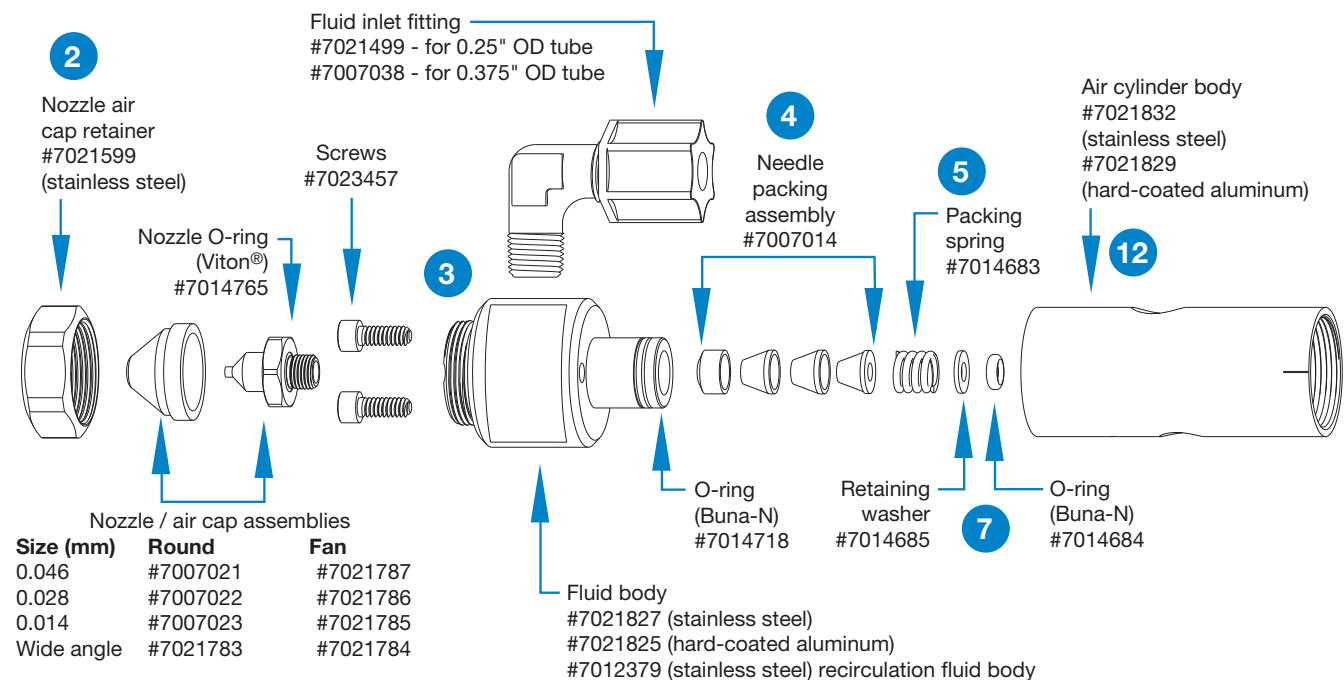
Valve Maintenance

To thoroughly clean the fluid body and replace needle packings:

1. Remove the needle stroke control knob and spring.
2. Remove the air cap retainer, then the air cap, nozzle, and fittings.
3. Remove the fluid body from the air cylinder body using a 7/64" hex wrench, then remove the O-ring.
4. Use extraction tool #7021552 to remove the needle packings from the fluid body.
5. Remove any remaining packings and the spring from needle.
6. Before reassembling, clean the fluid body, air cap and nozzle in appropriate solvent and replace the O-ring. Clean the needle with a cloth dampened in solvent.
7. Reassemble the valve in the reverse order of disassembly. Ensure that the small O-ring and washer on the bottom of the air cylinder body are in place before reinstalling the packing spring. Lubricate parts as indicated with Nye Lubricant #865, included in the Maintenance Kit.

Tools Required:

6" adjustable wrench
1/8" hex wrench
7/64" hex wrench
0.035" hex wrench
Snap-ring pliers
Packing extraction tool (#7021552)



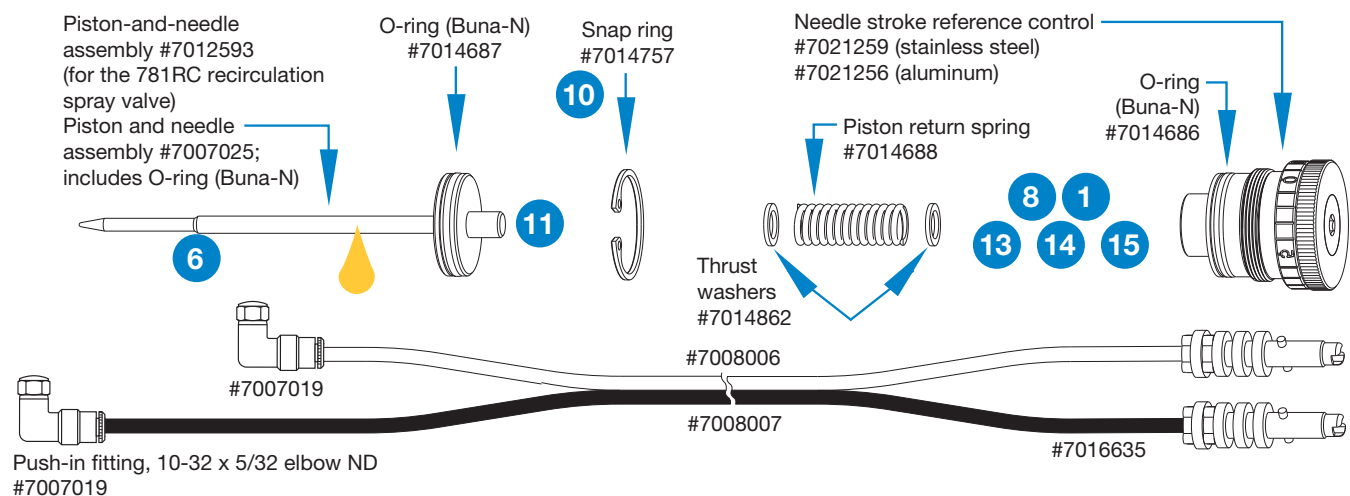
Valve Disassembly and Reassembly Procedures (continued)

Replacing the Piston-and-Needle Assembly or Piston O-ring

8. Remove the needle stroke control knob.
9. Remove the piston return spring and thrust washers.
10. Remove the snap ring.
11. With small pliers on the spring pilot, pull the piston and needle assembly out of the air cylinder. The piston and needle assembly is one unit and cannot be disassembled.
12. Clean the air cylinder body wall, replace the piston O-ring, and apply lubricant.
13. Reassemble the valve in the reverse order of disassembly. Lubricate the parts indicated with Nye Lubricant #864, included in the Maintenance Kit.

Maintenance Kit #7021610

Includes all air cylinder and fluid body O-rings, needle packings and lubricant.



Re-Seating the Needle and Nozzle Assembly

14. Rotate the stroke adjustment knob clockwise to the closed position.
15. To compress the needle into the nozzle, further rotate the stroke adjustment knob clockwise one additional reference mark.
16. Return the stroke adjustment to the normal setting and cycle the valve. If a slight leak remains, repeat steps 14 and 15.
17. If the leak persists, replace the nozzle.

Part #	Description
7007031	781S-SS spray valve
7021615	781S-SS-46F spray valve
7021618	781S-SS-WF spray valve
7021613	781S-SS-28 spray valve
7021614	781S-SS-28F spray valve
7021611	781S-SS-14 spray valve
7021612	781S-SS-14F spray valve
7021617	781S-SS-WA spray valve

Troubleshooting Guide

No fluid flow

- If the valve operating air pressure is too low, the valve will not open. Increase the air pressure to 4.8 bar (70 psi) minimum.
- The reservoir air pressure may not be high enough. Increase the pressure.
- The nozzle may be clogged. Clean the nozzle.
- The stroke adjustment may be closed. Open the stroke adjustment.
- The control and nozzle air lines may be reversed. Check for proper connection.

Valve does not provide clean shutoff, leaving build-up on the nozzle

- The needle may be improperly seated in the nozzle seat. Remove the nozzle, clean the needle and nozzle, and replace worn or damaged parts.
- Needle packings may be binding due to leakage, preventing the needle from fully closing. Disassemble the valve and replace the packings if there is evidence of leakage.

Fluid flows from the nozzle but will not spray

- The nozzle air pressure may be too low. Increase the air pressure.
- The air passageway between the nozzle and the air cylinder cap may be obstructed. Remove the air cylinder cap and clean the air cylinder cap and nozzle.
- If the fluid viscosity is too high, it will not atomize. Reduce viscosity.



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