

# 784S-SS 316L MicroSpray Valve

## Maintenance & Parts Guide



To order 784S-SS, Aseptic MicroSpray Valve, refer to part #7012988.

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EFD

# Valve Disassembly and Reassembly Procedures

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

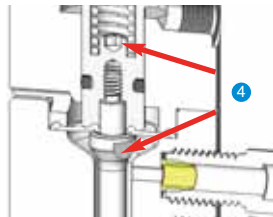
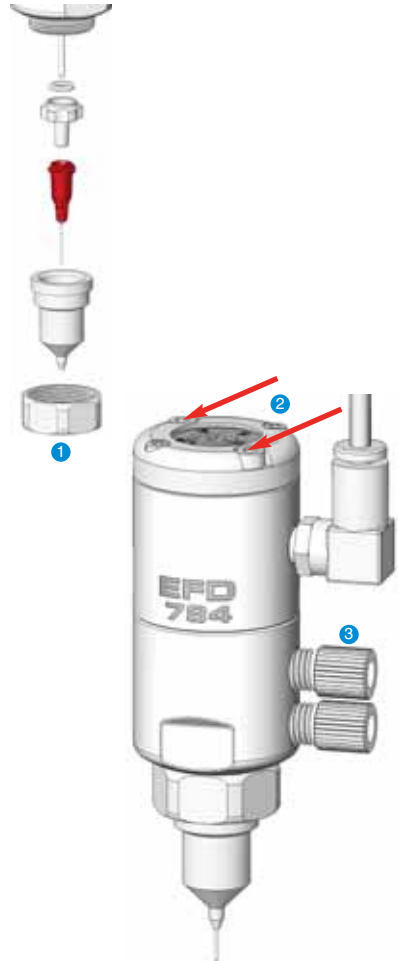
## Valve Maintenance: Fluid Body

To thoroughly clean the fluid body and replace Diaphragm:

1. ❶ Remove SS air cap retainer nut, air cap, and microspray tip adapter from the fluid body. Dispose of dispensing tip. Do not reuse.
2. ❷ Remove the two retainer screws at the top of the valve to release fluid body.
3. ❸ Remove fluid inlet and nozzle air fittings.
4. To reinstall the fluid body, align fluid body holes with air cylinder body holes and reinsert retainer screws. Torque to 1.58 Nm (14 inch pounds).

## Diaphragm

5. Back out stroke control two turns counterclockwise from the closed position.
6. Remove fluid body.
7. ❹ Insert allen wrench (2.5 mm) through stroke reference control and engage piston shaft.

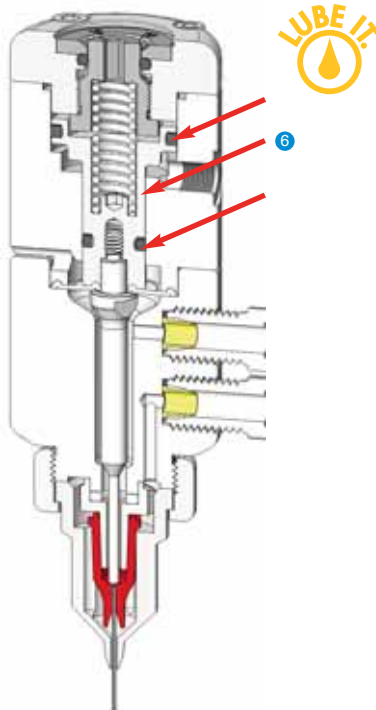


8. Using the hex on the shaft, unthread shaft, and remove shaft and diaphragm.
9. Install new diaphragm onto needle shaft.
10. With allen wrench engaged into piston, thread needle shaft/diaphragm onto piston assembly.
11. Reinstall fluid body and torque retainers screws to value specified in step 4.
12. Turn stroke control clockwise until closed, and then reopen to desired stroke.



## Piston O-ring

13. Remove fluid body and diaphragm.
14. 5 Remove stroke control and spring by loosening stroke control retainer screws.
15. Remove the piston.
16. 6 Lubricate O-rings, piston shaft and air cylinder wall with Magnalube-G.
17. Reinstall components in reverse order of disassembly.



### Round air cap, use tip size listed below:

| Part Number | Gauge Size | length |
|-------------|------------|--------|
| 7018300     | 23         | 1/2"   |
| 7018331     | 25         | 1/2"   |
| 7018393     | 27         | 1/2"   |
| 7018422     | 30         | 1/2"   |

### Fan air cap, use tip size listed below:

| Part Number | Gauge Size   | length |
|-------------|--------------|--------|
| 7018301     | 23           | 1/4"   |
| 7018332     | 25           | 1/4"   |
| 7018394     | 27           | 1/4"   |
| 7018423     | 30           | 1/4"   |
| 7018461     | 32           | 1/4"   |
| 7018476     | 33 chamfered | 1/4"   |

### Tools required:

2.5 mm hex wrench  
Adjustable wrench

# 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. Max fluid pressure: 25 psi. (1.7 bar).
- The needle stroke adjustment may be closed. Open stroke adjustment.
- Material may have clogged the fluid body, tip, or output tip adapter. Clean the fluid body outlet components. Change the tip.

## Steady drip

- A steady drip can be caused by a worn needle and seat, or a particle holding the needle off the seat. Clean and inspect the needle and seat for wear. Replace worn or damaged parts/tips.

## Fluid leaks out the drain hole

- Fluid leaking out the drain hole on the side of the valve indicates the diaphragm is ruptured. Replace the diaphragm.

## 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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#7012897  
screw  
M3X35MM-SS



#7012898  
screw  
M2X10MM-SS



#7013479  
stroke control  
assembly



#7012900 spring



#7013480  
piston 316L-SS



#7013674  
air cylinder  
316L-SS



#7013675  
diaphragm PTFE



#7013681  
needle 316L-SS



\*#7021486  
fitting 4.0 mm  
OD tube w/ferrule



#7013676  
fluid body 316L-SS



\*\*#7013680  
tip adapter 316L-SS



#7013678  
fan air cap  
316L-SS



#7013677  
round air cap  
316L-SS



#7013679  
retaining nut 316L-SS



\*#7021491  
fitting fluid 4.0 mm BARB  
for 6.0 mm OD x 4.0 mm ID  
feed line use



\*\*#7013682  
o-ring, tip adapter PTFE, 10 pc