

# "D" Series Maintenance Instructions

MS-INS-DK-1  
CP Revision M  
March, 2012

## Maintenance Kit Contents (follow all steps below):

|               |              |                            |
|---------------|--------------|----------------------------|
| Stem tip      | O-Ring       | Material Safety Data Sheet |
| Machine Screw | Back-up ring | Retaining Ring             |
| Lubricant (2) | Lower Washer | Instruction Sheet          |

## O-Ring Replacement Kit Contents (follow steps 1-4 and 7-13):

|                            |                   |                |
|----------------------------|-------------------|----------------|
| O-Ring                     | Back-up Ring      | Retaining Ring |
| Lower Washer               | Instruction Sheet | Lubricant (2)  |
| Material Safety Data Sheet |                   |                |

## DISASSEMBLY

**WARNING:** Before servicing any installed valve, you must



- depressurize system
- cycle valve

**WARNING:** Residual material may be left in valve and system.

**NOTE:** It is important to refer to the exploded view drawing while following the maintenance instructions.

1. Loosen set screws in handle and remove handle
2. Remove handle retaining ring and spool from valve. Set spool aside for later use. Discard the handle retaining ring.
3. Remove packing bolt and stem assembly from valve.
4. Remove the packing bolt from stem. Remove and discard the back-up ring, lower washer, and the o-ring.

**NOTE:** When disassembling or assembling the machine screw into the stem tip, to eliminate damage to the stem shank, carefully hold the stem by the stem head.

5. Being very careful not to damage the stem shank, hold the stem by the stem head and remove the machine screw and plastic stem tip and discard.

## ASSEMBLY

6. Insert the new stem tip into the stem shank. Place one light drop of thread lock (Loctite® 222 for PCTFE stem and PEEK stem tip) on the thread tip of the machine screw. Carefully screw the new machine screw into the stem tip and tighten to the following torque value:

OD and 14D: 1.5 to 1.75 in.-lb (0.17 to 0.20 N-m)  
16D: 3 to 3.5 in.-lb (0.34 to 0.40 N-m)

7. Place new lower washer over the stem. Lubricate the new o-ring with a thin film of MS-LT-1 lubricant (provided in kit). Carefully place the o-ring on the stem, making certain it does not twist. Place back-up ring on stem.
8. Place packing bolt over the stem.
9. Lube threads on packing bolt with MS-LT-WL13 (provided in kit). Screw packing bolt with stem assembly into valve body. Torque packing bolt to torques listed below.

| Valve Series | Torque, in.-lb (N-m) |
|--------------|----------------------|
| OD and 14D   | 70 (7.9)             |
| 16D          | 180 (20.3)           |

10. Install handle spool over stem.
11. Place retaining ring over stem and tighten by crimping ends together with pliers.
12. Lubricate the stem head with MS-LT-WL13 and screw handle on until the valve is shut-off.
13. To properly position the handle spool, turn valve upside down so the spool drops against the retaining ring and tighten the handle set screws.

Swagelok

Translations available on [www.swagelok.com](http://www.swagelok.com)

