



# R53MB/R54MB Installation and Maintenance

**MASTER PNEUMATIC-DETROIT, INC.**

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JAA 10-10-03  
REV MJF 03-01-13  
ECN 4853

## THANK YOU!

You have just purchased a quality Water Regulator from Master Pneumatic.

With care in its installation and maintenance, you can expect it to have a long and economical service life.  
Before you go any further, please take a few minutes to look over this information,  
then save it for future reference and for the useful service information it contains.



## Installation & Operation Procedures

### INSTALLATION:

1. Depressurize and lockout water pressure.
2. Install the Regulator in water line as near as possible to the device it is to serve.
3. Install the Regulator so water flows in same direction as arrow on Regulator head.
4. The Regulator has gauge ports on both sides of the head. It is necessary to install a pressure gauge or pipe plugs into each port before operating.
5. The Regulator can be installed with Dome up, down, or any rotation.

### OPERATION:

1. When adjusting pressure setting, always reset from a pressure lower than the final desired setting. For example, lowering pressure from 100 psi to 50 psi should be done by decreasing pressure to 30 psi then increasing to 50 psi.
2. To increase pressure: Pull out on Adjusting Knob (#10), turn clockwise.  
To lower pressure: Pull out on Adjusting Knob (#10), turn counter-clockwise.
3. Push in on Adjusting Knob (#10) to lock in place.

### TO CLEAN OR REPAIR:

1. Depressurize and lockout water pressure.
2. Reduce spring load to zero by turning Adjusting Knob (#10) counter-clockwise.
3. Remove Dome (#7) by turning counter-clockwise.
4. The Piston (#3) or Diaphragm Assembly (#4) can now be removed.
5. Visually inspect The Piston (#3) or Diaphragm Assembly (#4) for defects. If necessary replace.
6. Unscrew Valve Seat (A). Remove Valve Assembly (#2) including poppet, guide, o-ring and spring.
7. Visually inspect Valve Assembly (#2) for defects. If necessary replace.
8. Re-assemble, correctly locating all seals, starting with Valve Assembly (#2). Torque Valve Seat (A) to 3-5 in-lbs., do not over tighten. Insert u-cup and Piston Assembly (#3) into Head (#1) or follow instructions for Diaphragm Assembly (#4, figure 1 on page 2). Torque Dome (#7) to 90-100 in-lbs.
9. If the Regulator cannot be repaired by cleaning with soap and water, the parts should be replaced.

## Replacement Parts and Mounting Accessories

PART NUMBER	DESCRIPTION
A33-533	Valve Assembly Kit (Poppet Valve, Valve Spring, Valve Guide & O-ring)
A33-544A	Piston Assembly Kit (Piston and U-cup)
A10R-56A	Diaphragm Assembly Kit (Diaphragm, Support, Retainer and Spacer)
A33-75	Adjusting Screw Assembly Kit (Spring Rest, Adjusting Screw & Screw)
A33-82	Panel Mount Nut & Bracket
10R-26	Panel Mount Nut



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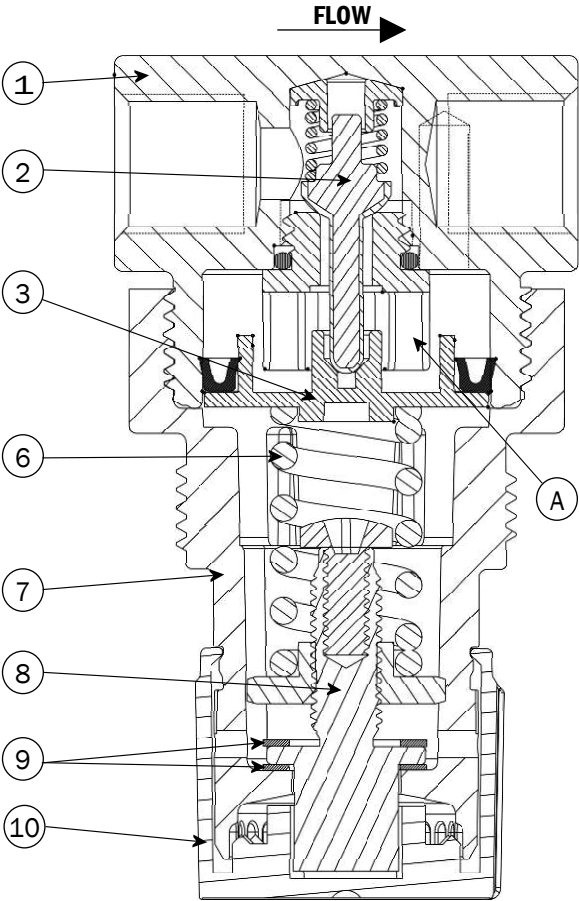
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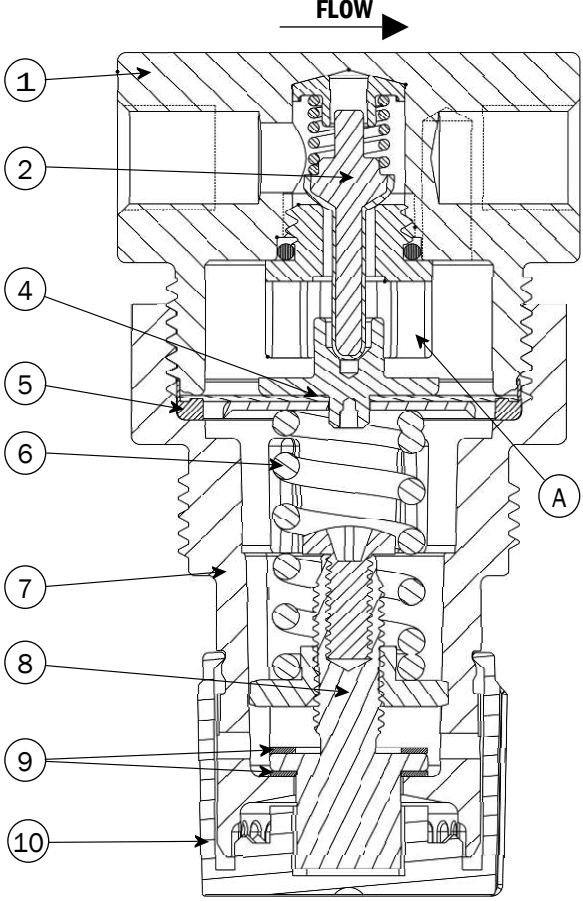
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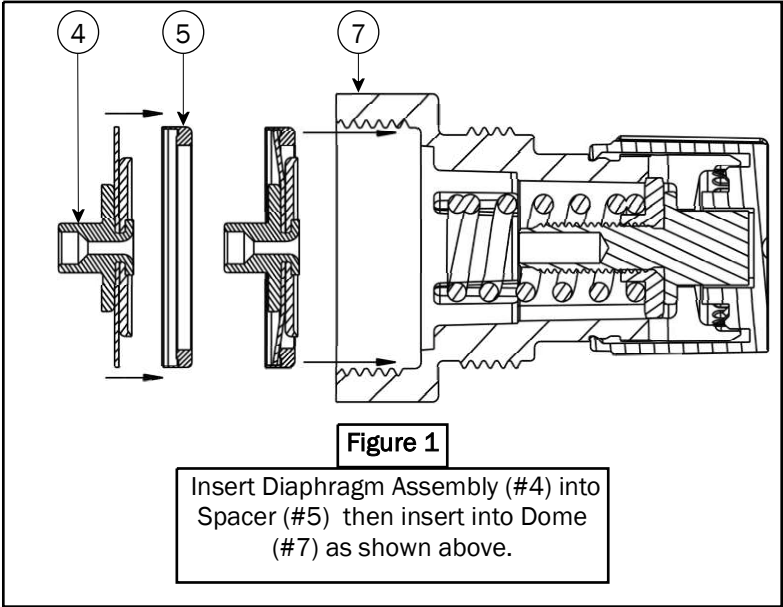
## Section View



**R53MB SECTION VIEW**  
(Piston Regulator)



**R54MB SECTION VIEW**  
(Diaphragm Regulator)



KEY	DESCRIPTION
1	Head
2	Valve Assembly Kit
3	Piston Assembly Kit
4	Diaphragm Assembly
5	Spacer
6	Main Spring
7	Dome
8	Adjustment Screw Assembly
9	Washer (Qty 2)
10	Knob
A	Valve Seat