



Model GP-1000 Main and Pilot Valve Lapping Procedure

This bulletin should be used by experienced personnel as a guide to lapping the main and pilot valves of the GP-1000 pressure reducing valves. You are encouraged to contact Armstrong International, Inc. or its local sales representative for additional information.

GP-1000 Lapping Procedure for Pilot Valve

Step 1. Remove the GP-1000 pilot spring chamber (4), spring (8), plates (6 and 7) and diaphragm (5).

Step 2. Remove the pilot valve assembly (19 and 20) and disassemble.

Step 3. Now you are ready to lap the pilot valve. Take out the pilot stem and valve (which is one piece). Apply thin layer of lapping compound on the area of the valve where the valve meets the seat. Place the pilot valve against the seat and by hand, rotate the valve back and forth against the seat. Be sure to push the valve down firmly against the seat while rotating the valve back and forth. After

approximately five minutes of rotating the valve, the surface will be clean. Wipe all excess lapping compound off parts.

Step 4. Reassemble the pilot valve assembly (19 and 20) back into the pilot body (2). Finish the reassembly with the items listed in Step 1 in reverse order. Test the valve to make sure there are no leaks. (Refer to the troubleshooting section from GP-1000 Installation and Maintenance Bulletin AY-114.)

*** Note: Use 800 grit lapping compound**

GP-1000 Lapping Procedure for Main Valve

Step 1. Remove the bottom cover (3) from the body (1).

Step 2. Remove the main valve spring (13). Note: Check gasket for wear.

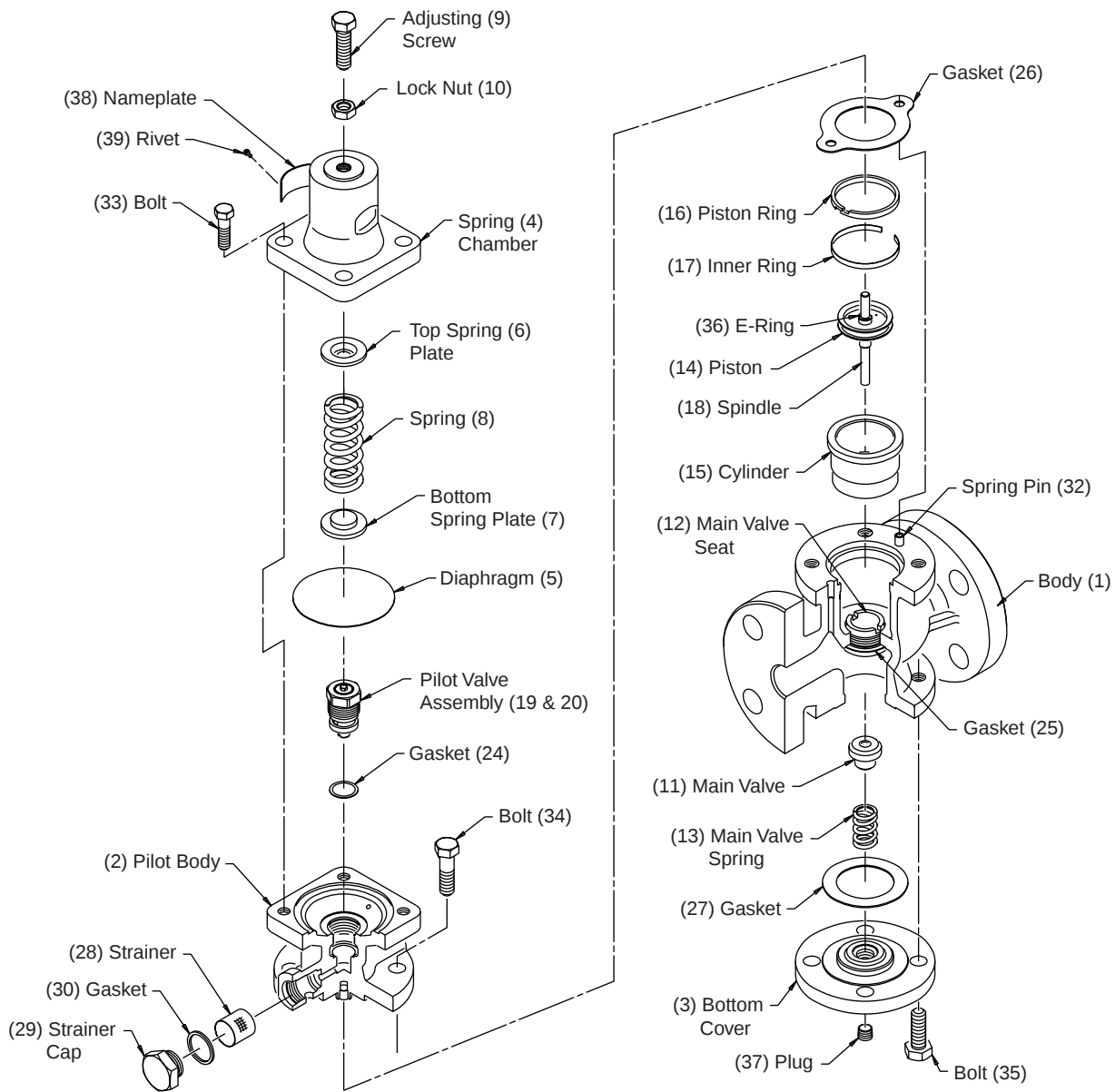
Step 3: Now you are ready to lap the main valve. Disassemble main valve (11). Apply thin layer of lapping compound around the radius edge of main valve (11) where the valve and seat meet. Place the main valve (11) onto its seat (12) and by hand rotate the valve back and forth against the seat. Be sure to push the main valve firmly against the seat while rotating back and forth. For a new valve and seat it will take approximately 20-40 minutes to create a new clean surface. A diamond based lapping compound is recommended. ***Note: Use 800 grit lapping compound.**

Step 4. Reassemble and test the valve for leaks. (Refer to the troubleshooting section from GP-1000 Installation and Maintenance Bulletin AY-114.)

Step 5. Verify the valve has been properly lapped by air testing the valve before putting it back into service. Hookup air supply to valve to simulate the valve in operation. Be sure to hookup air supply to inlet of valve and not the outlet. Adjust screw to shut down simulated flow. Using your hand, tightly cover outlet to feel for leakage. **Note:** If air pressure is felt at outlet, then lapping procedure needs to be repeated.

Use the same method to relap used valves and seat. This will take about 20-40 minutes to create a new clean surface.

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