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SOLENOID VALVE TROUBLESHOOTING GUIDE

If a problem is encountered using a Magnatrol solenoid valve, please review this checklist prior to submitting a "Report of Solenoid Valve Problem" form.

1. The valve must be mounted in a horizontal pipe run with the solenoid vertical and on top. Although our valves may sometimes work in other positions, they are not designed to do so and will not work consistently and reliably if installed incorrectly.

2. The valve must be mounted in the correct 'flow direction' as indicated by the arrow on the side of the valve body. The valve should be mounted with the high-pressure side piping at the back of the arrow (inlet) and the low-pressure side piping at the front of the arrow (outlet).

3. Are you getting backflow through the valve? Magnatrol valves will not work as a check valve. You will need to install a check valve downstream from the valve.

4. If the valve is failing to open or close, foreign matter (rust, metal chips, pipe dope, etc.) may have entered the valve causing the piston to jam. Solenoid valves, by design, have very small clearances between the piston and bore. A very small particle can be enough to jam a piston. We offer strainers to keep solids out of the valve. We recommend 60 mesh (.009) openings for pipe sizes up to 1" and .020" diameter perforations for 1-1/4" to 3" pipe sizes.

5. Be sure your system pressure does not exceed the pressure rating on the valve's nameplate.

6. Check the electrical specs on the valve's nameplate and compare it to the power supplied. A valve built for 120/60 (AC) will not work for 12 VDC, etc. Valves cannot be converted from AC to DC or from DC to AC by just changing the coil. The factory will assist you in converting the coil housing and coil.

7. Check the coil leads for continuity. If there is no continuity or no resistance at all, you need to replace the coil. NOTE: A jammed or worn piston frequently causes coil burnout and replacing the coil may cure the symptom but not the actual cause. (See sheet: 'Possible causes of solenoid coil burnout')

8. Has the valve been serviced recently? Note that if the bolts on flanged valves are over tightened, it may distort the valve bore and cause the piston to jam.

9. Is there a pressure regulator in the line? Regulators mounted upstream from the valve can cause problems. Regulators should be mounted downstream.

10. What is the fluid being controlled? Our valves are most often made for air, water, gas cryogenics or steam. Some fluids, such as oil, require special piston modifications. If your valve was made for a special fluid it will be indicated on the nameplate following the type number.

11. How old is the valve? Magnatrol valves are guaranteed for one year or 500,000 cycles – whichever comes first. If the valve is old or has been rapid cycled, there may be piston wear, which makes the clearances too large. A new piston assembly may be required.

12. How often is the valve cycling? Depending on the fluid and pressure, there are a few cases where the cycling is so rapid that it damages the internal piston parts. *(Contact factory for ways to address rapid cycling applications)*

Note: Factory repairs and repair parts (coil, piston assembly, and gasket) are available.