ASCO Solenoid Valve Troubleshooting Guide

A solenoid is an efficient means of automatic flow control. An ASCO solenoid valve will usually perform to a high standard, however if a problem does arise, our latest article offers our guide to troubleshooting ASCO solenoid valves.

ASCO solenoid troubleshooting

It is important to ensure a solenoid valve is functioning to an effective level at all times. Our ASCO solenoid troubleshooting guide looks to solve some of the most common and serious problems that may arise in the functioning of your solenoid.

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| Valve doesn’t operate after the coil has been energised | This may be caused by a number of reasons, including:  
  - Low voltage  
  - Burned out coil  
  - Foreign matter  
  - Excessive fluid pressure | In this case, it may be necessary to purchase replacement parts. However, before you buy a new component, it may be worth trying the following things:  
  - Check the voltage at the coil  
  - Clean the valve  
  - Reduce pressure |
| Valve will not close when the valve is de-energised | This can be caused by a low pressure drop across the valve, the coil not being de-energised, damage disc or seat causing internal leakage or a damaged spring. | The most common cause of this problem is an oversized solenoid valve. It may be necessary to purchase a smaller orifice or increase the pressure. Alternatively, the component may need to be cleaned or replacement parts should be sought. |
| Coil Failure | A coil failure may be due to excessive fluid pressure, overvoltage, missing solenoid parts or a damaged core or core tube. | This problem may be fixed by replacing the coil, checking for a damaged core, which then may have to be replaced or reduce the pressure. Alternatively, a new solenoid may be purchased that is suitable for the current pressure levels. |

Solenoid valve troubleshooting problems

Solenoid valves may perform to a substandard level for a number of reasons. Here, we outline some of the most common reasons why a solenoid valve may not function effectively:

- Contaminated media

  This is one of the most common problems with solenoid valve function. Using the wrong type of media or contaminated media can lead to problems with effective component functionality. If possible, install the solenoid vertically, in order to prevent media accumulation. A filter can also prevent contaminated media entering a solenoid valve.
• **Incorrect capacity**
  Oversizing or under sizing a solenoid valve can result in the valve working to an unsatisfactory level. Orifice size and valve configuration both contribute to the efficient working of a solenoid valve and, therefore, ensuring the correct size an important choice.

• **Wrong application**
  Applying a valve to an unsuitable application can cause a solenoid valve to experience a shorter lifespan than usual. Solenoids for ATEX or hazardous environments will be advertised as such and it is important that a valve which isn’t described as being suitable for dangerous environments isn’t used in one.

• **Under/Overvoltage**
  ASCO solenoid valves are usually designed to work at a nominal value, plus or minus 10%. If there is inadequate power supply, it may cause excessive noise and a reduced lifespan. Overvoltage can result in overheating, solenoid failure and reduced lifespan.

*MGA Controls* are leading distributors of solenoid valves. If you are having any trouble with a component, you can speak to our technical team who will be able to provide further advice on the efficient functioning of your solenoid valve.