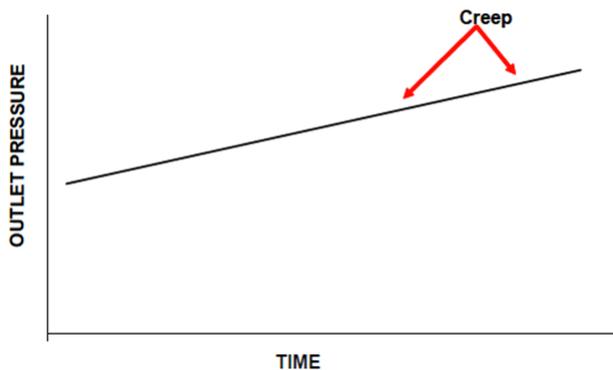




## 3 Ways to Prevent Creep in Regulators

### What is Creep?

Creep is an increase in outlet pressure and occurs when pressure escapes, even though the poppet is closed. One thing to keep in mind is regulator seats can be compromised by particulates in the process stream, which can cause minor imperfections in the sealing surface. The high flow and small orifice that is created during pressure regulation combine to turn a very small particle into a fast projectile. This projectile can nick the sealing surface of the seat and cause leakage. Incorporating a regulator with a soft seat can reduce the opportunity for creep to occur.



### Causes of Creep



- Contamination of the seat (see image on left)
- Using regulator as a shut-off device
- Not using upstream filtration
- Damage of the poppet or seat

### How to Prevent Creep?

#### 1. Use upstream filtration.

Filtering particulate from the process stream should be a high priority if accuracy and potential for creep are a concern. Some regulators include an integral filter upstream of the seat to help protect the seat. This small filter can reduce the potential for creep and increase the life expectancy and accuracy of your regulator.

#### 2. Do not use the regulator as a shut-off device, especially in gas service.

When selecting a regulator, the total system design must be considered to ensure safe, trouble-free performance. Using the appropriate block valve, upstream or downstream, depending on your system design, can help prevent creep. Use of an appropriate shut off valve will help to maintain accuracy and prevent creep.

#### 3. Self Venting.

Consider a self-venting option to eliminate damage to the diaphragm caused by captive pressure. Will system fluid and design allow for a self-vent option or a captured vent option? Both vent options allow you to purge excess downstream pressure and improve accuracy. A captured vent also provides a means of containment of hazardous media should a diaphragm or piston rupture.

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