

## WHAT HAPPENS TO MY BACKFLOW PREVENTION DEVICE?



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### **My Reduced Pressure Backflow Prevention Device (RP) leaking, is it defective?**

Is a Reduced Pressure Backflow Prevention Device (RP) that leaks through the relief valve exhaust port necessarily defective?

This question is asked regularly and here are two possible cases that explain why a RP would leak:

#### **Case #1: Gradual depressurization of the drinking water system**

The following video shows a gradual depressurization of the drinking water supply system. On it, watch the pressure gauge needle on the right and the water flowing through the relief valve exhaust port. The flow of water is directly linked to the depressurization of the supply network, as illustrated by the pressure gauge. When the needle goes down (depressurization of the drinking water supply network), the relief valve gradually opens, causing a flow through the exhaust port. As the pipe pressurizes and as the needle rises, the flow gradually subsides.

Video: <https://youtu.be/Olcf7DEhQt4>



## **Case #2: Instantaneous and sudden depressurization of the drinking water supply network**

In the following video, watch carefully at the dial which indicates the static pressure in the pipe. It varies between 80 and 120 lbs and then drops sharply to 40 lbs. During depressurization, there is a cause-and-effect relationship on the RP: when the pressure reaches 40 lbs, water flowing from the discharge port is observed. The flow occurs because of the sudden drop in pressure in the supply network.

Video: <https://youtu.be/lvKKANKDe-o>

Depressurization of the drinking water supply system caused by a water main failure or a high demand for water inside a building can cause the relief valve of the Reduced Pressure Backflow Preventer Device to open. The device reacts as if it were in the presence of a siphoning. Although fluctuation is a normal phenomenon, it can prematurely wear out the internal parts of the RP. Components can be installed on the pipes to minimize the damage caused by this type of fluctuation.

A leaking RP is therefore not necessarily defective. Other situations can cause a flow through the exhaust port. For an accurate diagnosis or for any questions about backflow prevention devices, [call on our experts.](#)

