



SINGER SOLUTIONS:

# A VISUAL GUIDE TO TROUBLESHOOTING YOUR VALVES



Water management professionals know all too well that problems arise — usually sometime after 2 a.m., or just as you’re walking out the door for a holiday weekend. No matter how well-prepared you are, or how sophisticated your system, sometimes you’re going to run into challenges. It’s simply the nature of the industry.

When you experience an issue with your valves (especially when they’re failing to open or close as expected) your first instinct is to call the factory for support. While some cases may require factory assistance, this isn’t always the most efficient solution.

If you’re experiencing these issues, the first step is to relax. Take some deep breaths. Imagine you’re on a beach, sipping a tropical beverage...

OK - now come back. We’ve got work to do.

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**TO SAVE YOU A PHONE CALL, A HEADACHE AND HOURS OF MUCH-NEEDED BEAUTY SLEEP, WE’VE DEVELOPED THREE HANDY VISUAL TROUBLE-SHOOTING GUIDES. PRINT THEM OUT, FRAME THEM AND STUDY THEM EVERY NIGHT — OR SIMPLY SAVE THIS GUIDE FOR EASY REFERENCE.**

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**PROBLEM 1:**  
**HELP! MY RELIEF VALVE ISN'T OPENING.**

Check the handles.  
**ARE ALL BALL VALVES OPEN?**

NO

YES

Go ahead, open them.  
**DID THE VALVE OPEN?**

YES

NO

It's possible there's no pressure to the valve inlet.  
**ARE THE LINE VALVES OPEN?**

NO

YES

Well, open them. How about now?  
**DID THE VALVE OPEN?**

YES

NO

The pilot isn't adjusted correctly. Try adjusting the pilot.  
**DID THE VALVE OPEN?**

YES

NO

**CONGRATULATIONS! YOU DID IT. GIVE YOURSELF A PAT ON THE BACK.**

YES

We've got a possible pilot diaphragm failure. We need to undo the flare nut downstream of the pilot.  
**WAS THERE FLOW THROUGH THE PILOT?**

NO

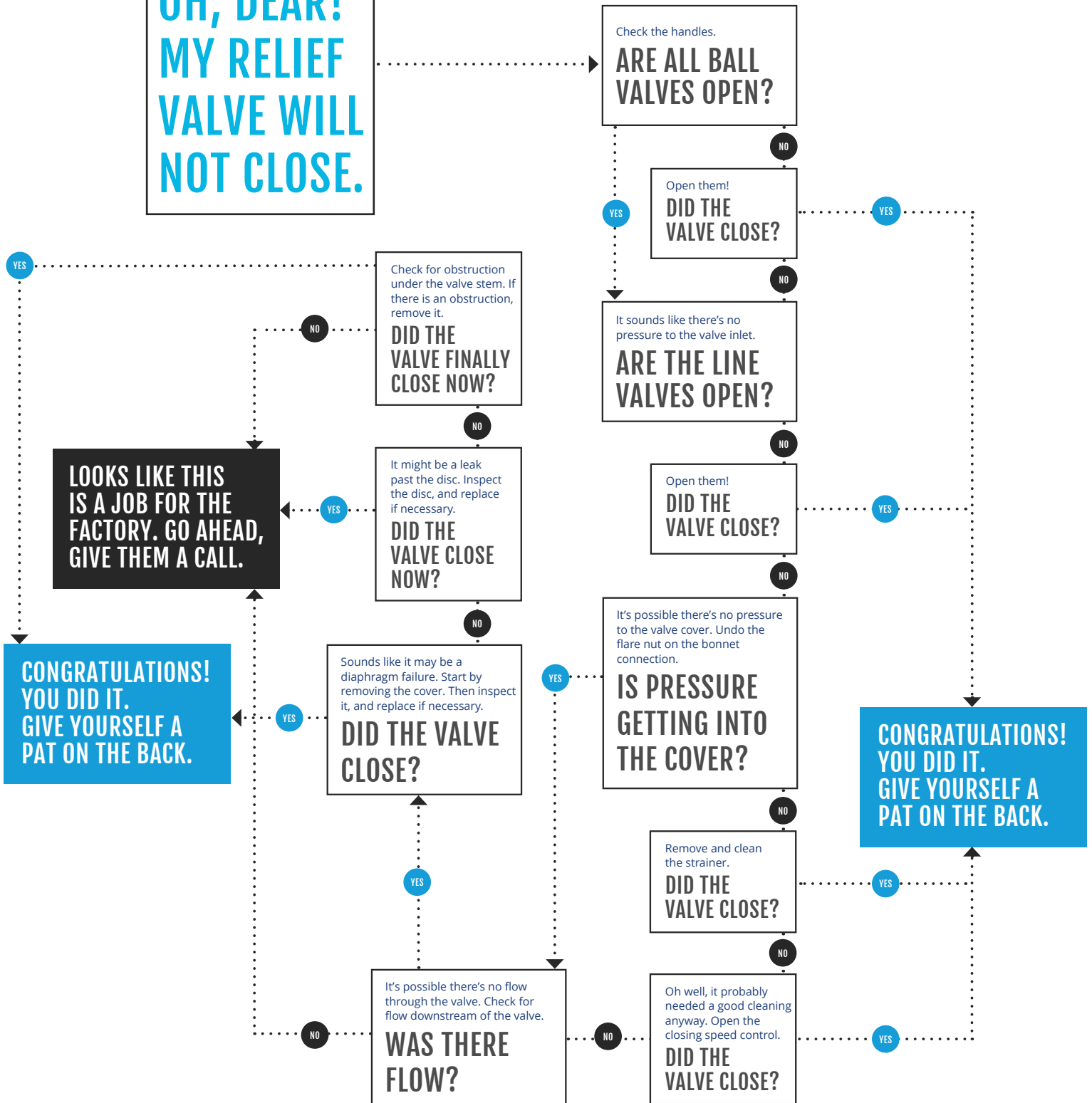
**LOOKS LIKE THIS IS A JOB FOR THE FACTORY. GO AHEAD, GIVE THEM A CALL.**

NO

Don't panic. Let's go ahead and disassemble the pilot and repair as necessary. (See IOM)  
**DID THE VALVE OPEN?**

YES

**PROBLEM 2:  
OH, DEAR!  
MY RELIEF  
VALVE WILL  
NOT CLOSE.**



**PROBLEM 3:**  
**SOS! MY REDUCING VALVE WILL NOT OPEN.**

Check the handles.  
**ARE ALL BALL VALVES OPEN?**

NO

YES

Go ahead, open them.  
**DID THE VALVE OPEN?**

NO

YES

It sounds like there's no pressure to the inlet of the valve.  
**ARE THE LINE VALVES OPEN?**

NO

YES

Well, open them.  
How about now?  
**DID THE VALVE OPEN?**

NO

YES

Model 26 isn't adjusted properly.  
You're going to have to adjust it.  
**DID IT WORK?  
IS THE VALVE OPEN?**

NO

YES

The pilot isn't adjusted correctly. Go ahead and adjust it.  
**DID THE VALVE OPEN NOW?**

NO

YES

Sounds like there may not be flow through the pilot. Undo the flare nut downstream of the pilot.  
**WAS THERE ANY FLOW THROUGH THE PILOT?**

YES

NO

**CONGRATULATIONS!  
YOU DID IT.  
GIVE YOURSELF A PAT ON THE BACK.**

**LOOKS LIKE THIS IS A JOB FOR THE FACTORY. GO AHEAD, GIVE THEM A CALL.**

**PROBLEM 4:**  
**UH-OH! MY REDUCING VALVE WILL NOT CLOSE.**

Check the handles.  
**ARE ALL BALL VALVES OPEN?**

Open them!  
**DID THE VALVE CLOSE?**

It's possible there's no pressure to the valve inlet.  
**ARE THE LINE VALVES OPEN?**

Open them!  
**DID THE VALVE CLOSE?**

This could be a case of a faulty pilot or diaphragm failure.  
**IS WATER LEAKING FROM THE TOP ADJUSTING SCREW?**

I think the pilot is faulty. Disassemble and repair the pilot per the IOM.  
**DID THE VALVE CLOSE?**

I don't think there is any pressure to the valve cover. Undo the flare nut on the bonnet connection.  
**IS PRESSURE GETTING INTO THE COVER?**

It's your lucky day, remove and clean the strainer.  
**DID THE VALVE CLOSE?**

Open the closing speed control.  
**DID THE VALVE CLOSE?**

Close the ball valve downstream of the pilot.  
**DID THE VALVE CLOSE?**

It's possible there's no flow through the valve. Check for flow in the downstream of the valve.  
**IS THERE FLOW?**

Sounds like a potential diaphragm failure. Remove cover and inspect it. If necessary go ahead and replace it.  
**DID THE VALVE CLOSE?**

There is a possible disc leak. Inspect disc and replace.  
**DID THE VALVE CLOSE?**

Sounds like something is obstructing the valve stem. Check under the stem and remove obstructions.  
**DID THE VALVE CLOSE NOW?**

**CONGRATULATIONS! YOU DID IT. GIVE YOURSELF A PAT ON THE BACK.**

**CONGRATULATIONS! YOU DID IT. GIVE YOURSELF A PAT ON THE BACK.**

**LOOKS LIKE THIS IS A JOB FOR THE FACTORY. GO AHEAD, GIVE THEM A CALL.**

**PROBLEM 5:**  
**YIKES! MY VALVE IS UNSTABLE.**  
(RAPID FLUCTUATIONS)

First, let's try bleeding the air off the indicator or bonnet plug, and other high points in the pilot system.

**DID THE PRESSURE STABILIZE?**

YES

NO

Check Model 26. If fitted, it's not set correctly. Adjust Model 26.

**DID THE PRESSURE STABILIZE?**

YES

NO

It's possible the sensing line is at a poor location, if fitted. You're going to have to relocate the sensing line to a better location.

**DID THE PRESSURE STABILIZE YET?**

YES

NO

**LOOKS LIKE THIS IS A JOB FOR THE FACTORY. GO AHEAD, GIVE THEM A CALL.**

**CONGRATULATIONS! YOU DID IT. GIVE YOURSELF A PAT ON THE BACK.**

## THE SINGER SOLUTION

Whether your system is challenged with pressure and level control issues, noncompliance with safety standards, pipe bursts or lack of surge protection, Singer Valve has a cutting-edge solution to fit your needs. Check out our [complete product guide](#) and contact a [Singer](#) representative to discuss your water system challenges.

## ABOUT SINGER VALVE

Singer Valve designs and manufactures automatic control valves for the global water industry. Since 1957, its pilot-operated diaphragm control valves have been installed on virtually every continent around the world. Whether it is water loss management in Southeast Asia, water conservation concerns in Saudi Arabia or urban distribution demands in the United States, Singer provides water management solutions to governments, cities, companies and contractors around the world.