
# Backflow Repair & Troubleshooting Questions

## #10

- I am testing the Check Valve and the needle keeps falling to 0.

Is there something wrong with my Gauge?

## Failure Is Normal

- Why Do We Test?
- Inexperienced Testers Be Ready……
- Invest Time in Gaining Experience.

## Don't Fear The Repair

- Maintenance is Normal
- Repairs are Normal
- We are the Experts
- Communicate with the Customer

## #9

- I am working on an Ames 4000SS relief valve.

How do I get the diaphragm into the proper position?

## Hit & Miss Method

- Good seal between your palm and diaphragm.
- Quick strike.
- Compressed air forces diaphragm into place.

## Inverting Method

- Try inverting piston assembly on a flat surface.
- Good seal between the surface and diaphragm.
- Compressed air.

## Consistent Pressure With Water

- Fill diaphragm with water.
- Good seal between your palm and diaphragm.
- Slowly press down.
- Water will not compress.

## #8

- I am working on a Wilkins 975XL. #2 check disc is clean and test drops below 1 PSID.

Should I stretch the spring to make it stronger ?

## Poppet Style Check Valves:

- Febco 825Y & 805Y
- Wilkins 975XL & 950XL
- Conbraco 40-200 & 40-100
- Check lid acts as a spring retainer and poppet guide.

## Check Valve Guide:

- Don't forget the guides.
- The guide surface is the recess hole in the lid and stem.
- Poppet should move freely.
- NO LUBRICANTS.

## 2nd Check Guide Problem

- Recess hole is not always centered.
- Try turning check lid counter-clockwise ¼ turn.
- Lid is o-ring sealed.

## #7

- I am testing a Watts 909. Both checks fail and RV will not open.

What could be the Problem ?

## #6

- We installed a DCA on a fire line. The water authority informed us that a DCDA is required.

Can we just install a bypass assembly to make it a DCDA?

## Creating A New Assembly:

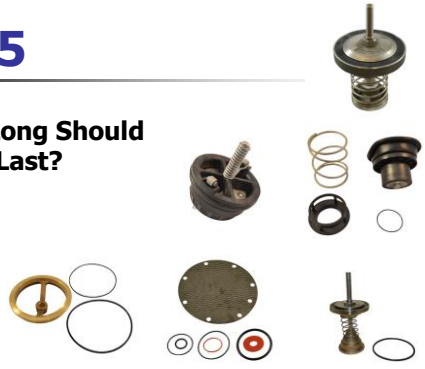
- Manufacturer model & serial #'s.
- Can it Void approvals?
- Does the Manufacturer offer parts?
- Always check with the Water Authority first.

## Adding A Metered Bypass:

- Low flows must be detected by the meter before the mainline checks open.
- You may have to change the check valves on mainline assembly.
- Approved meter and bypass device is important.

## #5

- **How Long Should Parts Last?**



## How Is The Assembly Being Used ?

- **Extreme Use**
  - Hospitals
  - Manufacturing Facilities
  - Apartment Complexes
- **Systems Change**

## How Is The Water Quality ?

- **Water Quality**
  - Debris Issues
  - Chemicals

## How Is The Environment?

- **Exterior Environment**
  - Hot Environments
  - Freeze Damage
- **System Hydraulics**
  - Backpressure
  - Water Hammer

## #4

- I am repairing an Ames 2000SS.

I have tried everything to unscrew the check valves and I can not get them to budge.

What am I doing wrong?

## Basics Of Removal:

- Cam Checks- used in 3000ss, 4000ss, 774, 994.
- Remove #1 CV first.
- Do not use cam arm to unscrew.
- Unscrew checks counter-clockwise by hand "if possible"

## Basics Of Removal:

- If too tight, place a drift punch or long screwdriver in the holes on the outer edge of the check module.
- Tap with hammer in correct direction.

## Special Tools:

- There are After Market tools available to help remove Cam Checks.

## What Makes Removal Difficult ?

- The stainless steel body can flex or twist if enough torque is applied to the piping system.
- This can cause the body to "egg-shape".

## Solution:

- Try loosening the gate valve bolts to relieve the stress.
- Remember to install the new cam checks before you retighten the bolts.

## #3

- **What is Testcock #1 Used For?**

## #2

- The Assembly tests fine but it continues to discharge intermittently.

What is causing Intermittent Discharge from the Relief Valve?

## Causes of Intermittent Discharge

- **Pressure Fluctuations**
  - Upstream
  - Downstream
- Is the Assembly working correctly?

## How Do You Explain To The Customer?

- Pressure Fluctuations
- Back Pressure Problems
- Water Hammer
- Be Ready with Solutions
- Preventative Maintenance is Normal

## #1

- We installed a rubber kit on an RPA. We reestablished pressure and now have a constant drip from the RV.

Is the something wrong with the RV? What should we do?

## Don't Panic.....Troubleshoot.

- Installing new parts does not always mean your repair is complete.
- Start troubleshooting.
- Simulate flow.
- Use your test gauge.

## The Problem:

- Many times it is a fouled #1 check- not the RV.
- Water turbulence can cause debris to break loose.

## The Solution:

- Clean and flush. (repeat if necessary).
- If debris is excessive, try pre-pressurizing the assembly.

## Things To Remember:

- Always schedule more time than you think you will need.
- Relax and think.
- Rule out the most obvious problems first.