

Warren's Leaky Faucet

By Kurt Arehart - January 2023

Warren and Kurt are good old buddies who have independently discovered the magic of YouTube how-to videos as a grand first step in any voyage into the home maintenance unknown. And sometimes they chase these ventures together.

Warren holds an ownership interest in a forty-year-old townhouse in Avon, Colorado, just minutes from Vail. Sixteen years back it was heavily updated, and yet the underlying age sometimes bubbles up. Fun little fix-it opportunities are around every bend, seems like.

As a frequent guest, Kurt is happy to dive in with Warren when a thing needs doing.

“Hey Warren, I noticed a leak in a faucet handle on the downstairs bathroom sink. When I turn on the hot water handle, water leaks out of the base. So far, the leak is slow enough that it flows into the sink and down the drain. So, no real damage. Yet.”

Warren, heaving a sigh: “You’re here less than a day and already you are trouble.”

A few hours later: “Hey Warren, now I notice that the hot-side leak happens even if I am running only the cold-side valve. Odd.”

Warren, taking a greater interest: “That makes sense. Since the hot and cold are mixed on their way to the faucet, cold water pressure could be leaking out the hot-side handle valve, if the seal there is bad.”

With a day off from skiing coming up Wednesday, this hobby-project seemed almost welcome.

Wednesday morning Kurt watched a few YouTube videos to understand what happens inside a Delta quarter-turn valve handle and how to replace the non-serviceable valve innards, called the cartridge. The handle comes off the valve spindle by loosening a set screw, and a simple “bonnet nut” secures the cartridge firmly to prevent leaks. The whole job can be done from above, no need to crawl into the vanity cabinet and work underneath. Easy!

“And remember”, said Karen in her how-to video, “ALWAYS turn off the water supply before starting the job.”

Kurt showed Warren this most relevant video, with Karen, and they got to it.

“Let’s get it apart and grab the cartridge we need to replace. The cold-side is a little easier to get to, so let’s try that one. Up here in Eagle County, I have no idea how difficult it might be to get the exact replacement parts we need. Home Depot is nearby here in Avon, but no telling what their inventory looks like, and that is assuming we can find someone there who understands our problem.”

Warren then found the little opening for the set screw that fastens the cold-side handle to the valve spindle inside.

Warren: "Karen said we need a 1/8" hex wrench to loosen the set screw."

Kurt: "I brought my bike toolbox with me on this trip, but I only have a metric set. Something might be close enough. Nope, the 4mm is too big and the 3mm is too small. Damn."

Warren: "Look, the handle lifts right off. It wasn't tightened, just staying in place due to its weight. And there is the valve cartridge, held in place by the bonnet nut."

Kurt: "That nut is pretty big. I don't have a wrench big enough in my bike toolbox."

Warren: "No problem, we keep a few basic tools here in the townhouse, and this channel-lock wrench should work fine. Look, it fits, and I am moving the bonnet nut. There. It's off. Huh. I wonder what is still holding the cartridge in place?"

At this moment the answer came. The cartridge shot out of its seating followed by a heavy jet of ice cold water that bounced forcefully off the ceiling, raining down upon the entire bathroom and the amateur plumbers therein. Kurt dove into the cabinet under the sink and turned the supply valves several turns each until the deluge stopped.

Water dripped from the ceiling and vanity mirror and cascaded from the front edge of the vanity into the cabinet below. They emptied the cabinet and a pile of towels was used to mop up more than a gallon of water from ceiling, walls, cabinet and toilet.

As it became clear that no real damage had been done, Kurt, standing on the toilet lid with towel in hand, started to laugh. Warren joined in.

Kurt: "We can NOT tell anyone about this, ever. Rookie move!!"

Along with the cartridge that had been shot off the ceiling was a cone-shaped spring laying on the vanity countertop.

Warren: "What's this spring for?"

Kurt: "Dunno. It must be part of the shut-off when the valve handle is twisted closed."

Warren: "Let's open up the hot-side valve and see where the spring is supposed to sit."

With the water supply shut off, just like Karen said, the hot-side came apart with no drama. The boys saw where the spring wants to sit, but discovered a little black rubber grommet fit onto the top of the spring.

Warren: "Damn. We're missing this part from the cold-side explosion. We gotta find it."

A serious search followed, with every bit of floor in the bathroom carefully surveyed. Nothing.

Warren: "It must have gone down the drain, probably gone."

Kurt: "I doubt it would have got washed up and through the gooseneck in the drain pipe. Maybe it lodged there."

Warren once again took up the channel-lock wrench and took off the gooseneck. He handed it to Kurt who emptied the water it held into the bathtub. No rubber grommet. It was just gone. Magic.

Warren: "I want to try reassembling the valve and the spring below without the grommet. Maybe it will still work."

No joy. The water flowed but could not be fully turned off. We needed that black rubber grommet, and it was just gone. We had Alyssa, Anne and Lori coming soon, and they all would depend on this sink working. And we were missing this vital bit. In trying to repair a thing, we had rendered it useless.

Warren: "I am going to check around and see what plumbing supply shops are within a reasonable drive. We GOTTA make this right before our guests arrive in a few days."

A pleasant surprise, Warren discovered there is a plumbing supply shop, the kind professional plumbers go to, just a mile east.

Warren: "If we get there now, late-morning, all the pros should be there and gone, and counter help may be a bit more available. Let's try this place first. Home Depot seems like a long shot."

Warren and Kurt made the short drive to Ferguson Plumbing Supply, and as hoped, the place was open and quiet. The counterman seemed pleased to be relieved of whatever bookkeeping chore he was suffering with and immediately pointed Warren to exactly what we needed. By the time Kurt had finished parking the car in the snowy lot and came into the shop, the replacement valve cartridges, springs and black rubber grommets were lined up on the counter.

Warren to Kurt: "We might as well replace everything on both the hot- and cold-side valves. If the hot-side is leaking, the cold-side probably isn't far behind."

And besides, Warren was so deeply relieved at finding a replacement for the vanished part that he wanted to be absolutely sure of having everything we needed to get the bathroom sink back in working order. Better to over-buy than under-buy. Kurt grabbed a roll of thread tape so the drain pipe gooseneck attachments could be sealed against leakage when reinstalled.

The sky and the prospects for successful job completion were brightening noticeably as they drove back to the townhouse.

Starting with the cold-side, Warren installed the new spring, its little black rubber grommet and the new valve cartridge correctly. The bonnet nut was installed and tightened enough to get a good seal, and then the valve handle dropped on. Kurt wrapped the threads of the drain gooseneck with sealing tape and Warren tightened it into place.

With the cold-side completely assembled and the drain back in order, Warren asked Kurt to crawl under the sink and open the cold-side water supply.

He did.

Cold water forcibly jetted out of the hot-side valve seat, which was completely unassembled, wide open. Again it was raining from the ceiling.

Warren, a bit high-pitched: "Turn it off!! Turn it off!"

Kurt was already in place under the sink, so this typhoon was of shorter duration. More towels were brought to bear, and Mop-up Two was under way. This time with a bit more cursing.

Kurt: "We DEFINITELY can't tell anybody about this. EVER. Especially not Karen."

Warren: "Clearly the hot and cold water mingle freely before coming out of the faucet. Nice to know."

They assembled the hot-side valve assembly correctly, including the spring with its precious black rubber grommet, snugged the bonnet nut down enough to prevent leakage, and then the test: Kurt went back under the sink and opened both the hot and cold water supplies.

No leaks. Both valve handles functioned perfectly. On was on. Off was off. Success! And both Warren and Kurt felt a deep sense of relief at getting the sink working well in time for Alyssa, Anne and Lori.

Warren and Kurt set about putting away tools, storing the spare parts, and generally putting the bathroom back in good order.

Kurt lifted the toilet lid for the first time since standing on it hours earlier during Mop-up One.

"Hey Warren, have a look at what's in the toilet."

This sort of invitation has never excited Warren, but with misgivings, he came over anyhow. There, under the clear water in the toilet bowl, was a black rubber grommet.