

FROM THE FIELD

Service surprises

BY DAN FOLEY CONTRIBUTING WRITER

When I returned from the 2013 AHR Expo, in Dallas, I had to climb out from under a mountain of messages, phone calls, emails and such that piled up, as is typical when I am away for a week. It was Saturday morning and I was planning on dropping by several jobsites. I had two crews working that morning. I planned on a leisurely Saturday morning walking a few sites, planning for the following week and enjoying the light traffic, which made for easy travel.

I typically take the phones over the weekend so I can determine if a call is truly an emergency call and, as important, whether they owe me money. I find it easier to collect past due accounts when the client is in dire need of our service.

The phone rang as I was driving to my first stop. A friendly competitor had referred this client to me when he learned he had a steam boiler. I love steam and I love a challenge, so I told the client I would stop by later that morning.

After a quick stop at a boiler replacement job on Capitol Hill, I was off to take a look at this recalcitrant steam boiler in Chevy Chase, Md. On the way to the job, I made the cardinal sin of trying to diagnose the problem before I even saw it. The owner gave me several clues: No heat in the second floor radiators, slightly warm radiators in the first

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floor, strange noises from the boiler he had never heard before and no water line in the sight glass.

"This one is easy," I thought to myself. "The boiler is flooded. I will be in and out in no time."

I arrived at the home, in Chevy Chase Village, introduced myself to the owners, and proceeded down the basement steps. As I was headed into the boiler room, the client asked when the heat would be back on. Since I already knew what the problem was, I responded, "Oh, in about thirty minutes."

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Photo 1: A short hose was screwed onto the boiler drain and the other end was put in the bucket.



Photo 2: The boiler drain was extended beyond the boiler jacket by a 3/4-inch black nipple and coupling. It had been leaking for some time and caused the nipple to corrode.

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Photo 3: Mark removed the stub with an easy-out and a 24-inch wrench. He then chased the threads with a pipe tap and threaded a new brass nipple and ball valve with a hose end.

This is when I committed my second cardinal sin: Never tell the client what is wrong with the system until the heat is back on. Too many times I have stumbled upon a problem but not necessarily THE problem (or the ONLY problem). Then you have to backtrack and explain the problem was really something else or there was more to it than you originally thought, rapidly losing your credibility.

Owners always want to know immediately what the problem is, even before you have a chance to set down your tool bag. I have several pat ways of responding to this question hopefully without appearing rude. One is: "I'm good, but not that good. Give me a few more minutes and I will have the problem accurately diagnosed." I say this with a smile and that usually does the trick. Another is this one: "Before I leave, I will have your heat back on. I will give you a full report when I am done. Right now, I need a few minutes to find the problem."

I don't mind an owner watching me while I work. But, I have found that if I am discussing the problem with a client and answering questions, I am not fully focused on the task at hand and tend to make mistakes, such as valves left closed, jumpers left in place, switches left off, etc. Everyone works differently and I have found that I work better when not conversing with the owner.

In this case, I ignored my own advice and declared the problem fixed before I even saw the boiler. The boiler was a gas-fired Weil-McLain, about 20 years old. I immediately noticed some piping and venting issues but they were not the acute problem, as they had been that way since installation. The acute problem was a perfectly clear sight glass. The boiler was flooded.

One key bit of information: I don't drive a service truck. I had my SUV with hand tools in the back and a bucket and hose I grabbed from one of my techs at the previous stop. I

retrieved the bucket and hose in order to drain the excess water from the system. There was no floor drain in the boiler room so I would have to lug full buckets to a laundry tub in an adjacent room. I planned to drain the boiler down to a normal water level and then determine the cause of the flooded boiler.

Once again I broke my own golden rule. I was chatting with the client and answering questions instead of paying attention to what I was doing. This is no big deal, I thought to myself. It will be a few minutes of manual labor draining the boiler until I get into the real troubleshooting anyway.

I screwed the short hose onto the boiler drain and put the other end into the bucket. (See photo #1) I was still chatting up the owner when I gave the stubborn valve a good hard twist. I went from surprise, to shock, to panic in a split second as the entire valve came off in my hand. Water was spraying everywhere as I tried to shove the valve back into the boiler block, like the little Dutch boy shoving his thumb in the dike.

Water was spraying all over the floor as I tried to stem the flow. Ordinarily, there would only be maybe eight or 10 gallons in a residential steam boiler. Sure, 10 gallons on the floor would make a mess but it was nothing to panic over. In this case, the boiler was flooded. The mains, first floor radiators and risers were full of water and this standing column of water was exerting all its pressure on the stub of rusted steel I was trying to re-insert into its original location.

The owner's eyes were wide as saucers as I tried, unconvincingly, to act like this was a normal occurrence. When the client ran to grab some rags and towels to mop up the widening pool, I had a chance to regroup and figure out how I would extricate myself from this unfortunate situation. I managed to open the sticky boiler drain while pushing what was left of it back into the boiler block

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Photo 4: Mark quickly found a leak in the electronic low water cutoff probe that shorted out the circuit board.

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allowing roughly 2/3 of the flow to make it into the bucket. With my free hand, I called my ace service tech, Mark Wilson, praying he would answer on a Saturday morning. Mark handled service while I was away so he had the weekend off. To my luck, he answered and I quickly explained the situation. He hopped in his truck and was there within 30 minutes.

By that time, I had managed to drain the boiler, empty countless buckets into the sink, and mop up the rest. I had a chance to find the cause of the situation I found myself in. The boiler drain was extended beyond the boiler jacket by a short 3/4-inch black nipple and coupling. This had been leaking slowly for some time causing the nipple to corrode. (See photo #2) There was not much left by the time I grabbed ahold of it. To his credit, the owner recognized that this was the cause and realized that I just happened to be the last fool to touch it.

There was still a rusted stub of the nipple left in the boiler block. The question was whether the threads in the boiler block were rusted out or if they would be damaged while trying to remove the stub. If so, the boiler would need to be replaced. Mark carefully removed the stub with an easy-out and a 24-inch wrench. He then chased the threads with a pipe tap and threaded a new brass nipple and ball valve with a hose

end. (See photo #3) To my relief, as well as the owner's, the repair held. I like to use this setup, even on new installs, as it is less likely to create the exact situation we had just dealt with. Also, the ball valve is less likely than a boiler drain to become clogged with mud and sediment.

We set the boiler water line and flipped the switch, thinking we were done. We watched in amazement as the feeder kicked in and quickly flooded the boiler. This is exactly why I try to avoid declaring a system "fixed" until the heat is back on. Mark quickly found a leak in the electronic low water cutoff probe that shorted out the circuit board (see photo #4). Luckily, he had a replacement part on his truck that resolved the issue.

Three hours after I had arrived, the heat was finally restored. If I had followed my own procedures and advice, I would have made less of a mess and been better prepared to deal with this problem. That's what happens when you get complacent. ●

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