

When Your Radon System Needs Repair: What Homeowners Should Know

Radon mitigation is not a set-and-forget solution. Over time, the equipment that keeps your home safe can wear down, get damaged, or simply lose efficiency. I have seen dozens of cases where a homeowner assumes their system is working fine, only to discover during a routine retest that radon levels have crept back up. That is usually the first sign that a radon system repair is needed.

Understanding how your system works and what can go wrong helps you catch problems early. It also saves you from paying for unnecessary work or, worse, living with elevated radon levels for months without knowing it. Let me walk you through the common issues, the repair process, and what you should expect from a professional radon mitigation service.



How a Typical Radon Mitigation System Works

Most homes in York County and the surrounding area rely on a method called active soil depressurization. The core idea is simple: a radon fan creates negative pressure under your

basement slab or crawlspace, pulling soil gas away from the foundation and venting it safely above the roofline. The main components include a sump pit or suction point, PVC piping running from that pit to the fan, a vent pipe that carries the gas outside, and a manometer that shows whether the system is pulling a vacuum.

A properly installed system runs quietly and uses very little electricity. The fan should last many years, but nothing lasts forever. When that fan starts to hum louder than usual or the manometer reading drops to zero, you have a problem.

Signs Your System Needs Attention

The most reliable indicator is the manometer. A U-tube manometer is a simple device with colored fluid that shows the pressure difference between the inside of the vent pipe and the room air. If the fluid levels are equal, the fan is not pulling. That can mean a failed fan, a blocked pipe, or a break in the PVC piping underground.

Another sign is a change in sound. Fans that start making grinding, rattling, or buzzing noises are usually on their way out. I have also seen cases where a fan stops completely but the owner does not notice because the system was tucked away in a corner of the basement. That is why I recommend checking your manometer at least once a month, especially after heavy rain or snowfall.



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Rain and snow can cause water to freeze inside the vent pipe or the fan housing. Ice buildup is a common cause of system failure in colder months. Proper installation with a drain hole at the low point of the piping can prevent that, but not every installer does it right.

Common Repair Scenarios

Fan Failure

This is probably the most frequent issue. Radon fans are designed to run continuously for years, but they are mechanical devices. Bearings wear out, electrical components fail, and sometimes a lightning strike or power surge can fry the motor. Replacing a radon fan is a straightforward job for a qualified technician, but it is not something a homeowner should DIY

unless they really know what they are doing. The fan must be matched to the system's pipe length, diameter, and the soil conditions under the house.

Blocked or Damaged Piping

PVC piping buried underground can crack due to shifting soil, tree roots, or even a heavy vehicle driving over the area. A crack in the suction line breaks the vacuum, and the system stops pulling soil gas. Finding the break sometimes requires digging, but a good technician can often diagnose the location by doing a pressure test or using smoke to trace the leak.

Less dramatic but equally important is a blockage from debris, insects, or small animals. I have pulled out wasp nests, mouse nests, and even a snake from vent pipes. A simple screen on the termination point can prevent most of that, but not every system has one.

Sealant and Crack Issues

Active soil depressurization works best when the sub-slab area is well sealed from the living space. If you have new cracks in your basement floor or around the sump pit, the system may still pull soil gas, but it could also pull conditioned air from your home down into the gravel, reducing the system's effectiveness. Sealing cracks with a high-quality sealant is often part of a [radon system repair](#). It is a cheap fix that can make a big difference.

Manometer Problems

Sometimes the manometer itself is the issue. The fluid can evaporate over time, or the tube can get clogged. A technician can replace or refill it easily, but if you are monitoring your own system, make sure you are reading it correctly. A zero reading does not always mean the fan is off; it could mean the manometer is broken.

The Repair Process

When I go out to diagnose a system, I start by checking the manometer and listening to the fan. Then I inspect the vent pipe from top to bottom, looking for damage or blockage. If the fan is running but the manometer shows no vacuum, I know there is a leak or a blockage somewhere. I might use a smoke pencil or a digital pressure gauge to narrow it down.



Once I find the problem, I give the homeowner a clear estimate. Sometimes it is a simple fan swap that takes an hour. Other times it involves digging up part of the yard to repair a broken pipe. The cost varies, but a good technician will explain what is needed and why, without pushing unnecessary extras.

After the repair, I always recommend a follow-up radon test. A short-term test or a continuous radon monitor can confirm that levels have dropped back below the EPA action level of 4 picocuries per liter. I have seen systems that were "fixed" but still not pulling enough vacuum because the repair was done poorly. Testing is the only way to be sure.

Preventive Maintenance

You can avoid many repairs by doing simple maintenance. Check your manometer monthly. Keep the area around the fan clean and free of clutter. If your system has a passive radon system that was installed during construction, consider upgrading to an active one if you ever test above the EPA action level. Passive systems rely on natural air pressure differences and are less reliable than active soil depressurization.

Also, if your home has radon-resistant construction features like a vapor barrier under the slab or sealed sump pit, make sure those are intact. A small tear in the barrier can let soil gas bypass the suction point.

When to Call a Professional

Some homeowners are tempted to fix things themselves. I get it. But radon system repair involves working with electrical wiring, PVC piping, and sometimes digging in tight crawlspaces. More importantly, a mistake can leave your family exposed to radon without you knowing it. A professional will have the right tools, a manometer, a radon test kit, and the experience to diagnose problems that are not obvious.

If your system is more than ten years old, or if you have never had it serviced, it is worth having a certified radon mitigation contractor take a look. They can tell you whether a simple repair or a full replacement is the better long-term choice.



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I have seen plenty of cases where a cheap band-aid fix led to another failure six months later. Spending a little more on a quality radon fan and proper installation pays off in the long run. The same goes for using good sealant and thick PVC piping. Cutting corners underground is a bad idea because digging it up again is expensive.

Final Thoughts

Radon mitigation is not complicated, but it requires attention. A well-maintained active soil depressurization system can keep your home safe for decades. When something goes wrong, prompt radon system repair is the best way to restore that protection. Whether it is a failed fan,

a cracked pipe, or a sealant issue, dealing with it quickly ensures that your family stays safe and your home's air quality stays healthy.

If you have not tested your home recently, get a short-term test or a long-term test from a hardware store or online. Test kits are cheap and easy to use. If the result is above the EPA action level, do not panic. Call a professional, get the system checked, and then retest. That is the smart, practical way to handle it.