



What Causes Refrigerant Leaks?

It's a fact: refrigerant leaks are the number one reason why we get called in for service calls.

Of course, customers don't call us and say "our A/C system has a refrigerant leak." What they say is "our A/C system is blowing warm air" – which can mean that the system is low on refrigerant.

When this happens, the easy fix is to simply add refrigerant and recharge the system. But doing this alone is not a long-term solution. The best practice is to do a leak check and find the source of the problem.

What are the causes of refrigerant leaks?

Under normal conditions, refrigerant cycles through your air conditioner system under high pressure. Just like the way a tiny hole can cause a balloon to deflate, even a tiny pinhole can cause your refrigerant to leak. The most common causes of leaks include:

- **Normal wear and tear** – As the system ages, formic acid (a naturally-forming acid that can be caused by cleaners, air fresheners and more) will eat away at the system's copper tubing and cause pinhole leaks.
- **Vibrations** – The unit vibrates, causing joints and connections to loosen and weaken over time until a copper fitting starts to come apart at a joint.
- **Manufacturers' defects** – In newer systems, refrigerant leaks are generally caused by manufacturers' defects. Something in the refrigerant circuit wasn't tightened or connected properly, or a faulty part was used.
- **Thin copper tubing** – Because the newer higher-efficiency systems are larger than the older units, manufacturers are fitting them with thinner copper tubing, in order to reduce the units' overall size. Thinner tubing is inherently weaker than thicker tubing.

Why is it so important to fix the source of a refrigerant leak?

If a refrigerant leak is not repaired at the source, bigger, more expensive problems are likely to develop. For example, a system low on refrigerant can cause oil return issues and potentially create high super heat, not providing enough cooling to the compressor and/or compressor windings, resulting in premature compressor failure.

Need help finding and fixing a refrigerant leak in your A/C system? Give us a call. This is one of our specialties!

About Evolution Mechanical

Evolution Mechanical is an experienced and reliable HVAC and refrigeration contractor that can design and install your HVAC system and keep it running smoothly. In addition, we're also highly knowledgeable energy consultants offering a full range of energy management services. Give us a call for all of your HVAC and energy needs!

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