

Freon and Freon leaks



According to environmental laws, any refrigerant that is purchased, installed, or removed must be extracted and filtered by

a certified technician using a certified refrigerant recovery or recycling machine. Certified technicians must successfully pass a written examination for the type of equipment they will be servicing. Exams are given by organizations which have been approved by the Environmental Protection Agency (EPA). It is extremely important that the coolant or Freon level

A 10% loss of Freon or coolant will cost the home or business owner 20% more in electrical costs and can cause undue wear and tear on the unit.

of an air conditioning system be checked often. The Air Conditioning Contractors of

America (ACCA) recommend checking once a year to maintain the proper Freon levels. If your Freon levels are low either the proper charge was never added to your system or there is a leak that should be repaired.

Low levels of Freon:

- can cause compressor failure,
- reduce the efficiency of your air conditioner,
- can freeze the evaporator coil, and
- can cause many other problems.



Freon leaks will not get smaller, but will usually increase in severity over time so a repair can save money on service as well. The laws on CFC's do not allow an air conditioning contractor to add Freon to a leaky commercial system if the leak is within 30% of the unit's capacity. They are required to fix the leak in the system. Violation of this law may cause contractors to lose their license.



Methods for locating leaks include visual inspection. There are two types of leak-detection systems.

An **electronic leak detection** checks the

condensing unit, suction line, liquid line, and evaporator coil. A second way to check for leaks is to **isolate the system** into four parts: the condensing unit, suction line, liquid line, and evaporator coil. Access fittings are installed and sealed shut to allow nitrogen pressure of several hundred pounds PSI (per square inch) is added to each component. Pressure readings are taken and recorded and if there is a pressure drop it indicates the presence of a leak. For very small leaks it may be necessary to leave the unit pressurized for up to 24 hours. With either method, the leak is repaired and the system is reconnected, vacuumed, and charged with refrigerant.

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