



Air Conditioner Refrigerant Charge and Airflow

To keep your cooling system operating at peak performance, have it checked every year, and have a refrigerant charge and airflow tune-up if the check-up indicates that it is needed.



Chances are you're spending more on air conditioning than you need to because your cooling system is out of tune. Air conditioning is a major energy consumer—accounting for as much as half of summer energy bills. Simply ensuring that your cooling system is running efficiently could save you hundreds of dollars a year.

What is a refrigerant charge and airflow tune-up?

A refrigerant charge and airflow tune-up is an analysis and correction of your cooling and duct system. The analysis determines two things:

- Whether or not the cooling system has the correct amount of refrigerant "charge" needed to cool your home or business on warm days
- Whether airflow through the duct system is effective and adequate. (The duct system delivers cool air into different rooms and workspaces through supply ducts and returns circulating air to the cooling coil)

The correction attends to deficiencies short of sealing, repairing, or renovating ductwork.

How important is a refrigerant charge and airflow tune-up?

The importance of adjusting your cooling system's refrigerant charge and airflow is similar to the importance of tuning up your car. A properly tuned system gives better performance and is more efficient to operate. A refrigerant charge and airflow tune-up on your cooling system can improve energy efficiency, comfort, and economy, as well as extend the lifespan of the system.

What are the benefits of proper refrigerant charge and airflow?

The potential benefits of correcting refrigerant charge include lower operating cost, improved comfort, faster cool down, and greater longevity of equipment.

A duct system with clogged filters, crushed, disconnected, or inadequately sized ducts, or poor design cannot deliver adequate airflow to control the temperature of all rooms.

Correcting airflow can reduce cost, improve comfort, and increase the useful life of your entire cooling system.

How can I get a system check or tune-up?

Contact a licensed Heating, Ventilation, and Air Conditioning (HVAC) contractor and set up an appointment to perform the service at your home or business.

What if the system is working properly?

Congratulations! Your system does not require refrigerant charge and/or airflow correction and is ready to perform efficiently.

What if the system isn't working properly?

You could save energy and money, be more comfortable, and maximize your HVAC system's performance by correcting problems identified by your licensed HVAC contractor. This will be money well spent.

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What should I expect during the tune-up?

Expect the HVAC contractor to do the following:

- Clean your air conditioner's indoor and outdoor coils, clean the blades of the indoor and outdoor fans, lubricate where needed, and check drive belts (if used) for wear and proper tension
- Check the unit's refrigerant charge, fix all leaks, and recharge the system if the refrigerant is low
- Check the cooling fan blades on the outside condenser coil unit to be sure they are straight and free of debris
- Test the air temperature difference between return and supply air for proper temperature drop. When possible, directly measure airflow for total and room-by-room values
- Test the entire system and determine whether it is working properly

What else should I know about my air conditioning system?

Your air conditioning system is part of your overall HVAC system. This system consists of various components that, in good condition, can make your home or business more energy efficient. These components may consist of:

- A heating unit, usually a combination of furnace and fan motor
- A cooling unit, which usually has an indoor evaporative coil mounted on the furnace and an outdoor condenser containing the compressor and a coil
- Filters
- A programmable thermostat
- The duct system
- Supply and return grills
- Dampers in the ducts or at the registers to balance airflow (optional)

Where can I get more information about my HVAC system and other ways to save energy?

Visit our Web site at pge.com Related Fact Sheets.

- Cooling
- Heating
- Heat Pump
- Duct Testing: Why Is It Important?
- What Is HVAC System Sizing?
- A Whole-System Approach to Heating and Cooling
- Buying a Central Air Conditioner? Ask for a TXV!
- Buying an Air Conditioner? Remember the EER!

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Business customers call our

Business Customer Center at **800-468-4743**.



OPTIMIZING THE ENERGY
EFFICIENCY OF YOUR
VENTILATION SYSTEM
REDUCES YOUR ENERGY
COSTS AND BENEFITS THE
ENVIRONMENT BY CONSERVING
OUR NATURAL RESOURCES
AND REDUCING AIR EMISSIONS.

How often should the tune-up be performed?

A system check is a recommended maintenance service that should be performed annually. A tune-up, however, is recommended only if the check-up indicates that one is needed. Once the cooling system has been charged correctly and has good airflow, and assuming no parts have been damaged, only basic service such as changing filters and cleaning the outdoor unit annually should be needed to maintain the system.



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Rev. October 2007

C-1530

Printed on recycled paper using soy-based inks.