

Maintaining Your HVAC System Health

Department of Energy

<http://www.energy.gov/energysaver/articles/maintaining-your-air-conditioner>

“The most important maintenance task that will ensure the efficiency of your air conditioner is to routinely replace or clean its filters. Clogged, dirty filters block normal airflow and reduce a system's efficiency significantly. With normal airflow obstructed, air that bypasses the filter may carry dirt directly into the evaporator coil and impair the coil's heat-absorbing capacity. Replacing a dirty, clogged filter with a clean one can lower your air conditioner's energy consumption by 5% to 15%.”

This Old House

http://www.thisoldhouse.com/toh/photos/0,,20209975_20477765,00.html

“Dirty filters kill your AC's efficiency, so install a new one every month during the cooling season for central and window units (or clean them if you've got the washable type). Look for the filter's minimum efficiency reporting value, or MERV, which ranges from 1 to 12 for home AC units; the higher the number, the better filtration it provides (and the more energy needed to pull air through it, so balance air-quality concerns with energy costs).”

How Stuff Works

<http://home.howstuffworks.com/home-improvement/heating-and-cooling/air-filters-clean.htm>

“It's an often heard maxim: Clean air filters save energy and money. Routinely changing or cleaning the filters from your home's heating and air conditioning system helps the units run more efficiently and enjoy a longer lifespan.”

ASHRAE – Top 10 Things About Air Conditioning

<https://www.ashrae.org/resources--publications/free-resources/top-ten-things-about-air-conditioning>

“As the filter does its job, it gets loaded with more and more particles. This actually has the effect of making it more efficient, but it also increases resistance and reducing airflow. When this happens, it is time to change the filter. How long it will take to happen depends on how dirty the air is and how big the filter is.

If you don't change the filter, the air flow will go down, and the system will not perform well. Not only that, but if the filter is too dirty, it starts to become a source of air pollution itself.”

Angie's List – How to Choose an HVAC Filter

<http://www.angieslist.com/articles/how-choose-hvac-air-filter.htm>

“Are you replacing your HVAC unit's air filter once a month? If not, you should be! HVAC filters have become increasingly important because they play a significant role in maintaining indoor air quality and energy efficiency. [A dirty HVAC filter hurts the unit's energy efficiency](#) and causes the system to be overworked.

A 2009 study by the American Society of Heating, Refrigeration and Air Conditioning Engineers has shown that dirty HVAC filters can reduce efficiencies by 10 percent or more.”

Note: The advice of changing your filter every month maybe outdated. The reason being is that a visual inspection of a filter does not necessarily tell you whether or not a filter needs to be changed. The better way of determining a filters condition is to measure the air pressure it creates in an HVAC. This is how air filter companies do it and this is how the CFM-GM does it as well!