



**ENERGY
TOPICS**



Maintaining Air Conditioners

UF/IFAS Extension
Marion County

WET is a monthly newsletter that brings you latest water and energy information.

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An air conditioner's filters, coils, and fins require regular maintenance for the unit to function effectively and efficiently throughout its years of service. Neglecting necessary maintenance ensures a steady decline in air conditioning performance while energy use steadily increases.

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%. For central air conditioners, filters are generally located somewhere along the return duct's length. Clean or replace your air conditioning system's filter or filters every month or two during the cooling season. Filters may need more frequent attention if the air



conditioner is in constant use, is subjected to dusty conditions, or you have fur-bearing pets in the house.

The air conditioner's evaporator coil and condenser coil collect dirt over their months and years of service. A clean filter prevents the evaporator coil from soiling quickly. In time, however, the evaporator coil will still collect dirt. This dirt reduces airflow and insulates the coil, reducing its ability to absorb heat. To avoid this problem, check your evaporator coil every year and clean it as necessary. Outdoor condenser coils can also become very dirty if the outdoor environment is dusty or if there is foliage nearby. You can easily see the condenser coil and notice if dirt is collecting on its fins. Also minimize dirt and debris near the condenser unit. Dryer vents, falling leaves, and lawn mower are all potential sources of dirt and debris. Cleaning the area around the coil, removing any debris, and trimming foliage back at least 2 feet allow for adequate airflow around the condenser.

Besides the above, a typical air conditioner maintenance check-up also includes the following:

- Check thermostat settings to ensure the cooling and heating system keeps you comfortable when you are home and saves energy while you are away.
- Tighten all electrical connections and measure voltage and current on motors. Faulty electrical connections can cause unsafe operation of your system and reduce the life of major components.
- Lubricate all moving parts. Parts that lack lubrication cause friction in motors and increases the amount of electricity you use.
- Check and inspect the condensate drain in your central air conditioner, furnace and/or heat pump (when in cooling mode). A plugged drain can cause water damage in the house and affect indoor humidity levels.
- Check controls of the system to ensure proper and safe operation. Check the starting cycle of the equipment to assure the system starts, operates, and shuts off properly.

