

# cooling

## Basic Maintenance

Air conditioners don't need a full seasonal tune-up the way most furnaces do. Some basic maintenance, however, will maximize cooling output. The well-maintained unit runs more efficiently, lasts longer, and makes rooms feel cooler at a lower, money-saving setting on the thermostat.

Before attempting anything more than superficial cleaning, unplug room units (or trip the breaker on central systems), and follow the manufacturer's directions for discharging the capacitor, an electrical storage device that can deliver a shock even when a unit is unplugged.

### Room-Unit Maintenance

To clean the inside of a room unit, remove the access panel and the filter and, following the manufacturer's directions, either wash the filter or replace it. Clean the inside coil fins with a vacuum cleaner or a soft brush, taking care not to bend the fins. On the outside, remove the grille, and repeat the cleaning process on the exterior coils.

Even in a clean unit, the meeting of warm, wet air and cool, dry air produces humidity. In most room units, it collects in a pan at the base of the machine, which can stagnate. To keep the surrounding airflow clean, rinse the tray with a 50:50 solution of chlorine bleach and water. Be sure the tray drains when you rinse it with water so you won't get overflows.

To keep the fan from pulling warm air

through to the inside, seal any leaks between the wall and the metal housing of the air conditioner. If you see moisture around the frame, warm air is probably seeping in, and you should caulk the seams inside and out.

### Central-System Maintenance

The procedure for cleaning a central air system, illustrated below, is similar to that for a room unit, except that the machines are bigger, and the parts may be harder to reach—even though on most systems they are split into two sections. To clean the condenser fan and oil the fan motor (both in the outside unit), you will probably have to remove a cover grille, loosen a setscrew holding the fan on the motor shaft, and then remove the fan to gain access to oil ports on the motor. Typically, fan motors get two or three drops of non-detergent motor oil in each port, but follow the manufacturer's oiling guidelines.

Use a garden hose to clean the outside condenser coils, but only after removing the coil guard so you can spray from inside the unit. Otherwise, water-soaked debris will lodge in the fins. If the fins are bent against each other, which is more likely on exterior coils set away from the protection of the building, it's best to use a specialized tool called a fin comb to clean and straighten them. One of several sets of small teeth arranged around the tool head will fit between undamaged fins above the bent area. As you pull the tool downward, its teeth will separate the compressed fins.

## Recharging

The refrigerant in older refrigerators, freezers, and air conditioners is typically an ozone-damaging hydrochlorofluorocarbon (HCFC) called Freon. Eventually, the closed refrigerant loop can develop a slow leak and cause the compressor to fail prematurely. As it's illegal to release HCFCs into the atmosphere, when an older machine needs repair, the service contractor is required to capture and recycle the refrigerant. Recycled HCFCs are used to recharge older machines. Most new models use less-damaging refrigerants.



Homeowners can take care of basic maintenance, but you need a contractor to recharge the refrigerant.

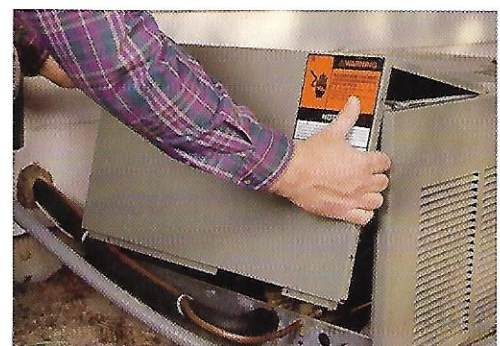
## Basic Cleaning

USE: ► screwdriver • soft brush • fin comb ► lubricating oil • new air filter

Service on an AC compressor normally is left to professionals. But there are several steps you can take to improve the efficiency of your central AC system. Be sure to follow the manufacturer's instructions for basic cleaning, and always shut off power to the unit before working on it. Also take care not to compress the delicate rows of metal fins, which must be separated to transfer temperature efficiently.



**1** The first step is to shut off power to the unit. Most systems have a cutoff box mounted outside near the fan unit.



**2** Remove the access panel, and use a garden hose and brush to clear any debris or grass clippings from cabinet grilles.