CFCs and HCFCs in the stratosphere are broken apart by sunlight, releasing millions of chlorine atoms that destroy the ozone layer.

The ozone layer is located in the stratosphere, 12 to 22 miles above the Earth's surface. This vital shield of gas stops damaging UVB rays from reaching the Earth's surface.

CFCs and HCFCs typically take 2 to 4 years to rise to the stratosphere. Once there, they may survive 2 to 150 years.

Without refrigerant recovery, about 4 million pounds of ozone-depleting chemicals escape from appliances at disposal each year.

Almost 8 million refrigerators and freezers are thrown away in the United States every year.

U.S. EPA
Office of Air and Radiation
Stratospheric Protection Division

This publication is distributed by:

United States Environmental Protection Agency
EPA/430/F-93/003a
May 1993

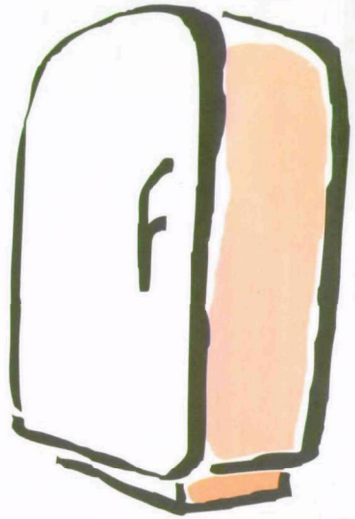
Office of Air and Radiation (6205 J)

EPA

Disposing of Appliances With Refrigerants:

What You Should Know

Many of the appliances we use every day contain man-made chemicals that destroy the ozone layer—our planet's natural protection against the sun's harmful ultraviolet radiation. Refrigerators, window and car air conditioners, and dehumidifiers rely on refrigerants that contain ozone-depleting CFCs and HCFCs, also known by the tradename "Freon".



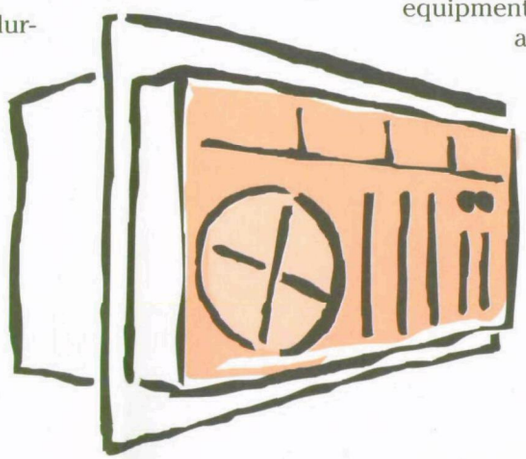
If not disposed of properly at a landfill or scrap processing facility, these common household items can release CFC/HCFC-containing refrigerant into the atmosphere. And that's bad news for the ozone layer! This brochure answers some questions you may have the next time you want to dispose of an old refrigerator or air conditioner—without contributing to this serious problem.

You Can't Just Throw It Away

A giant "ozone hole" was discovered over Antarctica in 1985. Recent scientific data reveal that ozone over the North Pole is also being depleted. As this problem worsens, major population centers in the U.S., Canada, and Europe are expected to be exposed to higher levels of ultraviolet-B (UVB) rays, posing serious threats to human, animal, and plant life.

In 1990, the U.S. Congress amended the Clean Air Act to include laws to protect the stratospheric ozone layer. Part of this new law prohibits the release of ozone-depleting refrigerants into the atmosphere during the service, maintenance, or disposal of air-conditioning and refrigeration equipment. As of July 1, 1992, refrigerants must be recovered from the appliance before disposal. The environmental and financial penalties for violating this prohibition are high: EPA is authorized to assess fines of up to $25,000 per day per violation of the Act.

Refrigerant-recovery machines have been developed and are now widely used. Recovery equipment draws the refrigerant into a holding tank. The refrigerant is then purified and sold for reuse, and the appliance discarded without harming the ozone layer.

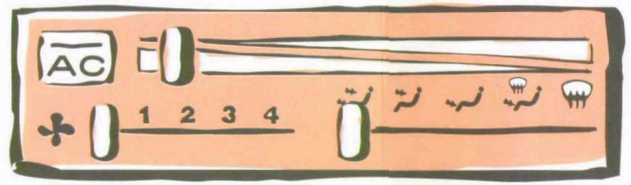


Think It Out Before You Throw It Out

We all share responsibility in helping to reduce ozone destruction by disposing of appliances properly. You can help by thinking about refrigerant recovery before arranging for pickup or disposal of your used appliances.

Your municipality, waste hauler, scrap metal recycler, or landfill may not own refrigerant-recovery equipment. Also, some are refusing to handle appliances with refrigerant in them. If this is the case in your area, here are a few steps you can take:

- ✔ Contact the public works department in your town or county and ask about home appliance recycling or CFC/HCFC- recovery programs.



- ✔ Ask your local home appliance retailers about their refrigerator and home appliance collection programs or about the availability of refrigerant-recovery services.
- ✔ Inform your local hauler or service person of the ozone problem and the law. You are doing him a favor—violators can be fined as much as $25,000 a day for letting refrigerant escape into the atmosphere!

Avoid trying to recover refrigerant yourself. Only a qualified professional with the proper equipment should recover refrigerants (or any other pressurized gas).

You should be prepared for a possible increase in appliance collection costs. You might consider the extra cost as your contribution to protecting the ozone layer.

You Can Do More

- *Be aware.* Technicians may no longer simply open a valve and vent refrigerant when servicing a unit. Before choosing a service company, ask about the company's practice of recovering and recycling CFCs and HCFCs.
- *Report violations.* Your EPA regional office has an air quality enforcement officer to take reports of violations of the refrigerant venting prohibition.
- *Stay informed.* Every citizen can play an important role in preserving the ozone layer. For more information about EPA's ozone protection program, responsible appliance disposal, or to report violations, call EPA's Stratospheric Ozone Protection Hotline toll free at (800) 296-1996. This public service is available Monday through Friday, 10:00 a.m. to 4:00 p.m. (Eastern time).

The Global Effort to Protect the Ozone Layer

Since banning the use of CFCs in aerosol cans in the late 1970's, the United States has been a leader in the global campaign to halt depletion of the stratospheric ozone layer. In 1987, the United States and 23 countries signed the Montreal Protocol and agreed to cut the production of ozone-depleting substances in half by the year 1998. In June 1990, the Protocol was amended to completely phase out production of ozone-depleting substances by the year 2000. Since then, U.S. production of these chemicals has decreased by nearly 50 percent. Now signed by over 110 nations, the Protocol has since been modified to require a virtual phaseout of CFC production by January 1, 1996.

The national program to protect the ozone layer also requires CFC and HCFC recycling, development of substitute chemicals, banning "non-essential" uses, and product labeling. New regulations may affect the products you buy and how they are maintained and disposed of. Think about it!

Recycled/Recyclable
Printed on paper that contains at least 50% recycled fiber