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EPA

Auto Air Conditioners and the Ozone Layer: A Consumer Guide

This pamphlet was developed by EPA in cooperation with:

Federal Trade Commission (FTC)

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Office of New York State Attorney General G. Oliver Koppell
Mobile Air Conditioning Society (MACS)
Society of Automotive Engineers (SAE)
Alliance for Responsible Atmospheric Policy
National Automobile Dealers Association (NADA)
National Institute of Automotive Excellence (ASE)
International Mobile Air Conditioning Association (IMACA)
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For further information, please call the Stratospheric Ozone Information Hotline 1-800-296-1996. Hours: 10:00 am - 4:00 p.m., Monday through Friday, except federal holidays.

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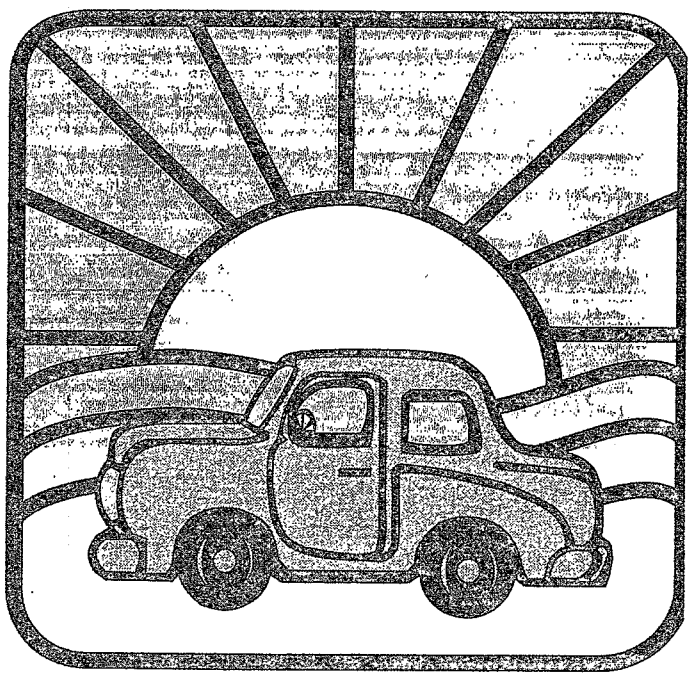


This pamphlet was developed to help you - the owner or prospective owner of an air conditioned car or truck - understand how efforts to protect the ozone layer will affect you and your vehicle now and in the future.

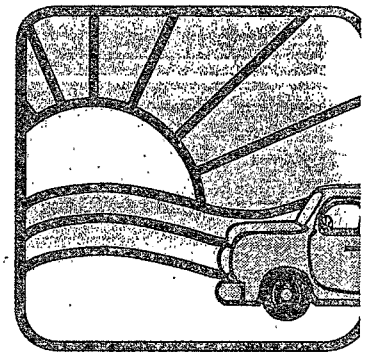
1. Our Threatened Ozone Layer

Scientists worldwide have concluded that chlorofluorocarbons (CFCs, also known by the trade name Freon) deplete the ozone layer. CFCs have been used in the manufacturing of many products, such as foam insulation, electronics equipment, refrigerators and air conditioners. When allowed to escape, these chemicals drift some 30 miles above the Earth to the stratospheric ozone layer - a layer of gas that screens us from the sun's powerful ultraviolet (UV-B) radiation. Once there, CFCs break apart - a process that releases chlorine, which then attacks ozone. A single chlorine atom can destroy more than 100 thousand ozone molecules.

The ozone layer is being depleted over Antarctica (the so-called Antarctic ozone hole), but also to a much lesser extent over North America, Europe, and other populated areas. A depleted ozone layer allows more UV-B radiation to reach Earth, harming human, animal, and plant life in many ways. Scientists around the world agree that increased UV-B radiation could over the long run cause a rise in cases of skin cancer and cataracts. Also, increased radiation could damage important food crops and marine ecosystems.

2. Protecting the Ozone Layer

The United States and over 126 countries are working together to protect the ozone layer by phasing out the production of ozone depleting substances in developed countries by the end of 1995. In addition, the Clean Air Act of 1990 contains requirements that ban the release of refrigerants during the service, maintenance, and disposal of air conditioning and refrigeration equipment and for labeling of products that are manufactured with or contain CFCs. To recover the CFC-12 used in vehicles, shops are required by law to use approved recover or recycling equipment when servicing air conditioning systems. Also, the technicians must be certified in the proper use of the equipment.



You can help save the ozone layer by getting professional vehicle service at a shop that uses recycling equipment and by having leaking systems repaired. Recycling and leak repair help to conserve CFCs and limits the release of the chemicals to the environment.

All automakers are responding to the CFC production phaseout by producing vehicles with an alternative refrigerant called HFC-134a. This refrigerant does not deplete the ozone layer because it does not contain chlorine. By the end of 1994, virtually all new cars, trucks and vans will be equipped with HFC-134a air conditioning systems.

3. The CFC Phaseout and Your Vehicle

The phaseout of the CFCs means that production of the chemicals will stop by the end of 1995, but it does not mean that you have to stop using or having your air conditioner serviced with CFC-12. While the available supply will be limited and the costs will certainly rise (in part due to a federal tax on CFCs), many vehicle owners will still be able to have their vehicle air conditioning units serviced with CFC-12 in the future. Here are some important points to keep in mind as the CFC phaseout nears.

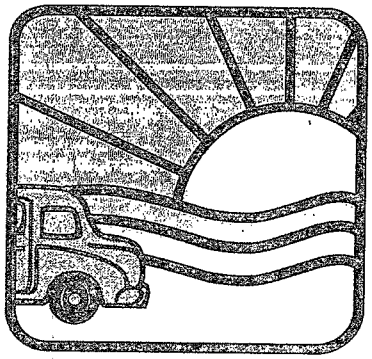
Reduce unnecessary loss of refrigerant. Preventive maintenance, fixing leaks, and recycling at service are key actions to minimize the need for additional CFC-12 refrigerant after the phase-out of production at the end of 1995.

Use only approved refrigerant. All vehicles that were designed for CFC-12 refrigerant should continue to use CFC-12 when serviced, unless the air conditioning system is modified to accept the HFC-134a alternative refrigerant. Using substances that have not been thoroughly tested may cause performance and safety problems and void your warranty.

Consider retrofit. You may decide that it makes sense to have your air conditioning unit modified to accept the HFC-134a alternative refrigerant. A good time to consider this is when you are having major service performed on your CFC-12 air-conditioner. Since the complexity and the cost of modifying a CFC-12 system will vary by vehicle make, model and age (the

range is $100 to over $800), the decision to retrofit may make more sense for some vehicles than others. For vehicles under warranty, please consult your dealer.

Follow recommended procedures. Vehicle manufacturers are working diligently to identify the retrofit procedures for each of their models that would permit the use of HFC-134a while maintaining reliability and cooling performance. If you choose to retrofit, make sure that your service center uses the manufacturer's recommended alternative refrigerant and follows its recommended procedures. For a list of available procedures, call the Stratospheric Ozone Information Hotline at (800) 296-1996. Also, be sure the retrofit includes a label and new HFC-134a fittings.



Buying a vehicle? Ask if the air conditioner uses HFC-134a, and if not, find out about any applicable warranties covering air conditioning service and repair. If you buy an extended warranty or service contract, make sure you find out whether it covers future air conditioning repairs or services.

EPA and the automotive industry are working together to make the transition away from ozone-depleting chemicals as smooth as possible, but we need your support and cooperation to make this effort a success.

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