



## Potential Environmental Impacts

The gases used as refrigerants in motor vehicle air conditioners (often referred to as CFCs or Freon™) become an environmental problem when they escape into the air. Some of the refrigerants are chlorofluorocarbons (CFC-12 or R-12). When released into the air, they rise into the upper atmosphere where they damage the protective ozone layer in the stratosphere. The ozone layer absorbs the sun's harmful ultraviolet (UV) radiation, and as it is damaged, living things on the earth become exposed to harmful UV radiation which can lead to skin cancer and cataracts. The newer refrigerants (e.g., HFC-134a or R-134a) are hydrofluorocarbons, and although they are non-ozone depleting, they contribute to global warming when released into the air. ([Complete listing of substitutes.](#))

## Legal Requirements

- ◆ The federal Clean Air Act prohibits the release (venting) of refrigerant into the atmosphere during any type of motor vehicle air conditioner (MVAC) service, maintenance, repair or disposal, including top-offs. Anyone repairing or servicing MVACs must recycle refrigerants on-site or recover refrigerants or send them off-site for reclamation. [Clean Air Act, Title VI, Sections 608 and 609, 40 CFR 82.34]
- ◆ Recovery/recycling or recovery-only equipment must be U.S. EPA-approved and this equipment is required even if you are only recharging or topping off systems. [Clean Air Act, Title VI, Section 609, 40 CFR 82.34]
- ◆ Any person who performs maintenance, service, repair or disposal of MVACs must be trained and certified in the proper use of refrigerant recovery and recycling equipment. [Clean Air Act, Title VI, Section 609, 40 CFR 82.34]. Training programs must include information on the proper use of equipment, the regulatory requirements, the importance of refrigerant recovery, and the effects of ozone depletion. To be certified, technicians must pass a test demonstrating their knowledge in these areas. (EPA [listing](#) of approved training and testing programs.)
- ◆ Technicians must keep a copy of their proof of certification at their place of business.
- ◆ If refrigerant is recovered and sent to a reclamation facility, records of the name and address of that facility must be kept on file at the service shop. [Clean Air Act, Title VI, Section 609, 40 CFR 82.34] (EPA [listing](#) of approved reclamation facilities.)
- ◆ CFC-12 (R-12) has no longer been manufactured as of December 31, 1995. Although production ended, the use is still permitted. CFC-12 used today is constantly being recovered and recycled so there is still refrigerant available. However, the sale of CFC-12 is prohibited



**Refrigerant recovery equipment  
CFC-134a (left) and CFC-12 (right)**

to anyone other than certified technicians [Clean Air Act, Title VI, Section 609, 40 CFR 82.34].

## Legal References

- Clean Air Act, Title VI, Sections [608](#) (National recycling and emission reduction program) and [609](#) (Servicing of motor vehicle air conditioners)
- Prohibitions and Required Practices - [40 CFR 82.34](#), Subpart B

## Best Management Practices

- ★ Make it a policy to encourage vehicle owners to have leaks repaired to reduce emissions and extend the useful life of their air conditioner. Repair of leaking systems will also help vehicle owners avoid the need to continue to refill systems with high priced refrigerant.

## Additional Information

- [Ozone Layer Protection Regulatory Programs](#) (U.S. EPA)
- [Just the Facts for MVACs](#) (EPA Regulatory Requirements for Servicing of Motor Vehicle Air Conditioners)
- EPA - 800-821-1237 or 617- 918-1858, [mohamoud.abdi@epa.gov](mailto:mohamoud.abdi@epa.gov)
- National CFC Hotline - 800-296-1996
- DEEP Bureau of Air Management - 860-424-4152

## Pollution Prevention Checklist

- ✓ Do you encourage customers to repair rather than “top off” leaking systems?
- 



### Did You Know?

The [ozone layer](#) acts as a blanket in the stratosphere that protects us from harmful ultraviolet [UV](#) radiation. [Scientists](#) worldwide believe that man-made chemicals such as CFCs are rapidly destroying this layer of gas 10 to 30 miles above the earth's surface. Ozone loss in the atmosphere is likely to lead to an increase in cataracts and skin cancer, which is now one of the fastest growing forms of cancer.