



# Stratospheric Ozone Protection *Final Rule Summary*



## COMPLYING WITH THE REFRIGERANT RECYCLING RULE

This fact sheet provides an overview of the refrigerant recycling requirements of section 608 of the Clean Air Act, 1990, as amended (CAA), including final regulations published on May 14, 1993 (58 FR 28660), and the prohibition on venting that became effective on July 1, 1992.

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### Overview

Under section 608 of the CAA, EPA has established regulations that:

- Require service practices that maximize recycling of ozone-depleting compounds (both chlorofluorocarbons [CFCs] and hydrochlorofluorocarbons [HCFCs]) during the servicing and disposal of air-conditioning and refrigeration equipment.
- Set certification requirements for recycling and recovery equipment, technicians, and reclaimers.
- Restrict the sale of refrigerant to certified technicians.
- Require persons servicing or disposing of air-conditioning and refrigeration equipment to certify to EPA that they have acquired recycling or recovery equipment and are complying with the requirements of the rule.
- Require the repair of substantial leaks in air-conditioning and refrigeration equipment with a charge of greater than 50 pounds.
- Establish safe disposal requirements to ensure removal of refrigerants from



goods that enter the waste stream with the charge intact (e.g., motor vehicle air conditioners, home refrigerators, and room air conditioners).

### **The Prohibition on Venting**

Effective July 1, 1992, section 608 of the Act prohibits individuals from knowingly venting ozone-depleting compounds used as refrigerants into the atmosphere while maintaining, servicing, repairing, or disposing of air-conditioning or refrigeration equipment. Only four types of releases are permitted under the prohibition:

- "De minimis" quantities of refrigerant released in the course of making good faith attempts to recapture and recycle or safely dispose of refrigerant.
2. Refrigerants emitted in the course of normal operation of air-conditioning and refrigeration equipment (as opposed to during the maintenance, servicing, repair, or disposal of this equipment) such as from mechanical purging and leaks. However, EPA is requiring the repair of substantial leaks.
  3. Mixtures of nitrogen and R-22 that are used as holding charges or as leak test gases, because in these cases, the ozone-depleting compound is not used as a refrigerant. However, a technician may not avoid recovering refrigerant by adding nitrogen to a charged system; before nitrogen is added, the system must be evacuated to the appropriate level in Table 1. Otherwise, the CFC or HCFC vented along with the nitrogen will be considered a refrigerant. Similarly, pure CFCs or HCFCs released from appliances will be presumed to be

refrigerants, and their release will be considered a violation of the prohibition on venting.

4. Small releases of refrigerant which result from purging hoses or from connecting or disconnecting hoses to charge or service appliances will not be considered violations of the prohibition on venting. However, recovery and recycling equipment manufactured after November 15, 1993, must be equipped with low-loss fittings.

### **Regulatory Requirements**

#### *Service Practice Requirements*

*1. Evacuation Requirements.* Beginning July 13, 1993, technicians are required to evacuate air-conditioning and refrigeration equipment to established vacuum levels. If the technician's recovery or recycling equipment is manufactured any time before November 15, 1993, the air-conditioning and refrigeration equipment must be evacuated to the levels described in the first column of Table 1. If the technician's recovery or recycling equipment is manufactured on or after November 15, 1993, the air-conditioning and refrigeration equipment must be evacuated to the levels described in the second column of Table 1, and the recovery or recycling equipment must have been certified by an EPA-approved equipment testing organization (see *Equipment Certification*, below).

Technicians repairing small appliances, such as household refrigerators, household freezers, and water coolers, are required to recover 80-90 percent of the refrigerant in the system, depending on the status of the system's compressor.

**TABLE 1**  
**REQUIRED LEVELS OF EVACUATION FOR APPLIANCES**  
**EXCEPT FOR SMALL APPLIANCES, MVACS, AND MVAC-LIKE APPLIANCES**

Type of Appliance	Inches of Mercury Vacuum* Using Equipment Manufactured:	
	Before Nov. 15, 1993	On or after Nov. 15, 1993
HCFC-22 appliance** normally containing less than 200 pounds of refrigerant	0	0
HCFC-22 appliance** normally containing 200 pounds or more of refrigerant	4	10
Other high-pressure appliance** normally containing less than 200 pounds of refrigerant (CFC-12, -500, -502, -114)	4	10
Other high-pressure appliance** normally containing 200 pounds or more of refrigerant (CFC-12, -500, -502, -114)	4	15
Very High Pressure Appliance (CFC-13, -503)	0	0
Low-Pressure Appliance (CFC-11, HCFC-123)	25	25 mm Hg absolute

\*Relative to standard atmospheric pressure of 29.9" Hg.

\*\*Or isolated component of such an appliance

2. *Exceptions to Evacuation Requirements.* EPA has established limited exceptions to its evacuation requirements for 1) repairs to leaky equipment and 2) repairs that are not major and that are not followed by an evacuation of the equipment to the environment.

If, due to leaks, evacuation to the levels in Table 1 is not attainable, or would substantially contaminate the refrigerant being recovered, persons opening the appliance must:

- isolate leaking from non-leaking components wherever possible;

- evacuate non-leaking components to the levels in Table 1; and
- evacuate leaking components to the lowest level that can be attained without substantially contaminating the refrigerant. This level cannot exceed 0 psig.

If evacuation of the equipment to the environment is not to be performed when repairs are complete, and if the repair is not major, then the appliance must:

- be evacuated to at least 0 psig before it is opened if it is a high- or very high-pressure appliance; or

be pressurized to 0 psig before it is opened if it is a low-pressure appliance. Methods that require subsequent purging (e.g., nitrogen) cannot be used.

"Major" repairs are those involving removal of the compressor, condenser, evaporator, or auxiliary heat exchanger coil.

3. *Reclamation Requirement.* EPA has also established that refrigerant recovered and/or recycled can be returned to the same system or other systems owned by the same person without restriction. If refrigerant changes ownership, however, that refrigerant must be reclaimed (i.e., cleaned to the ARI 700 standard of purity and chemically analyzed to verify that it meets this standard). This provision will expire in May, 1995, when it may be replaced an off-site recycling standard.

#### *Equipment Certification*

The Agency has established a certification program for recovery and recycling equipment. Under the program, EPA requires that equipment manufactured on or after November 15, 1993, be tested by an EPA-approved testing organization to ensure that it meets EPA requirements. Recycling and recovery equipment intended for use with air-conditioning and refrigeration equipment besides small appliances must be tested under the ARI 740-1993 test protocol, which is included in the final rule as Appendix B. Recovery equipment intended for use with small appliances must be tested under either the ARI 740-1993 protocol or Appendix C of the final rule. The Agency is requiring recovery efficiency standards that vary depending on the size and type of air-conditioning or refrigeration equipment being serviced. For recovery and recycling

equipment intended for use with air-conditioning and refrigeration equipment besides small appliances, these standards are the same as those in the second column of Table 1. Recovery equipment intended for use with small appliances must be able to recover 90 percent of the refrigerant in the small appliance when the small appliance compressor is operating and 80 percent of the refrigerant in the small appliance when the compressor is not operating.

#### *Equipment Grandfathering*

Equipment manufactured before November 15, 1993, including home-made equipment, will be grandfathered if it meets the standards in the first column of Table 1. Third-party testing is not required for equipment manufactured before November 15, 1993, but equipment manufactured on or after that date, including home-made equipment, must be tested by a third-party (see *Equipment Certification* above).

#### *Refrigerant Leaks*

Owners of equipment with charges of greater than 50 pounds are required to repair substantial leaks. A 35 percent annual leak rate is established for the industrial process and commercial refrigeration sectors as the trigger for requiring repairs. An annual leak rate of 15 percent of charge per year is established for comfort cooling chillers and all other equipment with a charge of over 50 pounds other than industrial process and commercial refrigeration equipment. Owners of air-conditioning and refrigeration equipment with more than 50 pounds of charge must keep records of the quantity of refrigerant added to their equipment during servicing and maintenance procedures.

### ***Mandatory Technician Certification***

EPA has established a mandatory technician certification program. The Agency has developed four types of certification:

- For servicing small appliances (Type I).
- For servicing or disposing of high- or very high-pressure appliances, except small appliances and MVACs (Type II).
- For servicing or disposing of low-pressure appliances (Type III)
- For servicing all types of equipment (Universal).

Persons removing refrigerant from small appliances and motor vehicle air conditioners for purposes of disposal of these appliances do not have to be certified.

Technicians are required to pass an EPA-approved test given by an EPA-approved certifying organization to become certified under the mandatory program. Technicians must be certified by November 14, 1994. EPA expects to have approved some certifying organizations by September of this year. The Stratospheric Ozone Hotline will distribute lists of approved organizations at that time.

EPA plans to "grandfather" individuals who have already participated in training and testing programs provided the testing programs 1) are approved by EPA and 2) provide additional, EPA-approved materials or testing to these individuals to ensure that they have the required level of knowledge.

Although any organization may apply to become an approved certifier, EPA plans to

give priority to national organizations able to reach large numbers of people. EPA encourages smaller training organizations to make arrangements with national testing organizations to administer certification examinations at the conclusion of their courses.

### ***Refrigerant Sales Restrictions***

Under Section 609 of the Clean Air Act, sales of CFC-12 in containers smaller than 20 pounds are now restricted to technicians certified under EPA's motor vehicle air conditioning regulations. Persons servicing appliances other than motor vehicle air conditioners may still buy containers of CFC-12 larger than 20 pounds.

After November 14, 1994, the sale of refrigerant in any size container will be restricted to technicians certified either under the program described in *Technician Certification* above or under EPA's motor vehicle air conditioning regulations.

### ***Certification by Owners of Recycling and Recovery Equipment***

EPA is requiring that persons servicing or disposing of air-conditioning and refrigeration equipment certify to EPA that they have acquired (built, bought, or leased) recovery or recycling equipment and that they are complying with the applicable requirements of this rule. This certification must be signed by the owner of the equipment or another responsible officer and sent to the appropriate EPA Regional Office by August 12, 1993. A sample form for this certification is attached. Although owners of recycling and recovery equipment are required to list the number of trucks based at their shops, they do not need to have a piece

of recycling or recovery equipment for every truck.

### *Reclaimer Certification*

Reclaimers are required to return refrigerant to the purity level specified in ARI Standard 700-1988 (an industry-set purity standard) and to verify this purity using the laboratory protocol set forth in the same standard. In addition, reclaimers must release no more than 1.5 percent of the refrigerant during the reclamation process and must dispose of wastes properly. Reclaimers must certify by August 12, 1993, to the Section 608 Recycling Program Manager at EPA headquarters that they are complying with these requirements and that the information given is true and correct. The certification must also include the name and address of the reclaimer and a list of equipment used to reprocess and to analyze the refrigerant.

EPA encourages reclaimers to participate in third-party reclaimer certification programs, such as that operated by the Air-Conditioning and Refrigeration Institute (ARI). Third-party certification can enhance the attractiveness of a reclaimer's product by providing an objective assessment of its purity.

### *MVAC-like Appliances*

Some of the air conditioners that are covered by this rule are identical to motor vehicle air conditioners (MVACs), but they are not covered by the MVAC refrigerant recycling rule (40 CFR Part 82 Subpart B) because they are used in vehicles that are not defined as "motor vehicles." These air conditioners include many systems used in construction equipment, farm vehicles,

boats, and airplanes. Like MVACs in cars and trucks, these air conditioners typically contain two or three pounds of CFC-12 and use open-drive compressors to cool the passenger compartments of vehicles. (Vehicle air conditioners utilizing HCFC-22 are not included in this group and are therefore subject to the requirements outlined above for HCFC-22 equipment.) EPA is defining these air conditioners as "MVAC-like appliances" and is applying the MVAC rule's requirements for the certification and use of recycling and recovery equipment to them. That is, technicians servicing MVAC-like appliances must "properly use" recycling or recovery equipment that has been certified to meet the standards in Appendix A to 40 CFR Part 82, Subpart B. In addition, EPA is allowing technicians who service MVAC-like appliances to be certified by a certification program approved under the MVAC rule, if they wish.

### *Safe Disposal Requirements*

Under EPA's rule, equipment that is typically dismantled on-site before disposal (e.g., retail food refrigeration, cold storage warehouse refrigeration, chillers, and industrial process refrigeration) has to have the refrigerant recovered in accordance with EPA's requirements for servicing. However, equipment that typically enters the waste stream with the charge intact (e.g., motor vehicle air conditioners, household refrigerators and freezers, and room air conditioners) is subject to special safe disposal requirements.

Under these requirements, the final person in the disposal chain (e.g., a scrap metal recycler or landfill owner) is responsible for ensuring that refrigerant is recovered from equipment before the final disposal of

**THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)  
REFRIGERANT RECOVERY OR RECYCLING DEVICE  
ACQUISITION CERTIFICATION FORM**

EPA regulations require establishments that service or dispose of refrigeration or air conditioning equipment to certify by August 12, 1993 that they have acquired recovery or recycling devices that meet EPA standards for such devices. To certify that you have acquired equipment, please complete this form according to the instructions and mail it to the appropriate EPA Regional Office. **BOTH THE INSTRUCTIONS AND MAILING ADDRESSES CAN BE FOUND ON THE REVERSE SIDE OF THIS FORM.**

**PART 1: ESTABLISHMENT INFORMATION**

Name of Establishment

Street

(Area Code) Telephone Number

City

State

Zip Code

Number of Service Vehicles Based at Establishment

County

**PART 2: REGULATORY CLASSIFICATION**

Identify the type of work performed by the establishment. **Check all boxes that apply.**

- ☐ Type A - Service small appliances
- ☐ Type B - Service refrigeration or air conditioning equipment other than small appliances
- ☐ Type C - Dispose of small appliances
- ☐ Type D - Dispose of refrigeration or air conditioning equipment other than small appliances

**PART 3: DEVICE IDENTIFICATION**

Name of Device(s)	Manufacturer	Model Number	Year	Serial Number (if any)	Check Box if Self-Contained
1					<input type="checkbox"/>
2					<input type="checkbox"/>
3					<input type="checkbox"/>
4					<input type="checkbox"/>
5					<input type="checkbox"/>
6					<input type="checkbox"/>
7					<input type="checkbox"/>

**PART 4: CERTIFICATION SIGNATURE**

I certify that the establishment in Part 1 has acquired the refrigerant recovery or recycling device(s) listed in Part 2, that the establishment is complying with Section 608 regulations, and that the information given is true and correct.

Signature of Owner/Responsible Officer

Date

Name (Please Print)

Title

<input type="text"/>	<input type="text"/>
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## Instructions

**Part 1:** Please provide the name, address, and telephone number of the establishment where the refrigerant recovery or recycling device(s) is (are) located. Please complete one form for each location. State the number of vehicles based at this location that are used to transport technicians and equipment to and from service sites.

**Part 2:** Check the appropriate boxes for the type of work performed by technicians who are employees of the establishment. The term "small appliance" refers to any of the following products that are fully manufactured, charged, and hermetically sealed in a factory with five pounds or less of refrigerant: refrigerators and freezers designed for home use, room air conditioners (including window air conditioners and packaged terminal air conditioners), packaged terminal heat pumps, dehumidifiers, under-the-counter ice makers, vending machines, and drinking water coolers.

**Part 3:** For each recovery or recycling device acquired, please list the name of the manufacturer of the device, and (if applicable) its model number and serial number.

If more than 7 devices have been acquired, please fill out an additional form and attach it to this one. Recovery devices that are self-contained should be listed first and should be identified by checking the box in the last column on the right. Self-contained recovery equipment means refrigerant recovery or recycling equipment that is capable of removing the refrigerant from an appliance without the assistance of components contained in the appliance. On the other hand, system-dependent recovery equipment means refrigerant recovery equipment that requires the assistance of components contained in an appliance to remove the refrigerant from the appliance.

If the establishment has been listed as Type B and/or Type D in Part 2, then the first device listed in Part 3 must be a self-contained device and identified as such by checking the box in the last column on the right.

If any of the devices are homemade, they should be identified by writing "homemade" in the column provided for listing the name of the device manufacturer. Type A or Type B establishments can use homemade devices manufactured before November 15, 1993. Type C or Type D establishments can use homemade devices manufactured anytime. If, however, a Type C or Type D establishment is using homemade equipment manufactured after November 15, 1993, then it must not use these devices for service jobs.

**Part 4:** This form must be signed by either the owner of the establishment or another responsible officer. The person who signs is certifying that the establishment has acquired the equipment, that the establishment is complying with Section 608 regulations, and that the information provided is true and correct.

## EPA Regional Offices

Send your form to the EPA office listed under the state or territory in which the establishment is located.

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

CAA 608 Enforcement Contact: EPA Region I,  
Mail Code APC, JFK Federal Building, One  
Congress Street, Boston, MA 02203

New York, New Jersey, Puerto Rico, Virgin Islands

CAA 608 Enforcement Contact: EPA Region II,  
Jacob K. Javits Federal Building, Room 5000, 26  
Federal Plaza, New York, NY 10278

Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia

CAA 608 Enforcement Contact: EPA Region III,  
Mail Code 3AT21, 841 Chestnut Building,  
Philadelphia, PA 19107

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

CAA 608 Enforcement Contact: EPA Region IV,  
Mail Code APT-AE, 345 Courtland Street, NE,  
Atlanta, GA 30365

Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

CAA 608 Enforcement Contact: EPA Region V,  
Mail Code AT18J, 77 W. Jackson Blvd., Chicago,  
IL 60604

Arkansas, Louisiana, New Mexico, Oklahoma, Texas

CAA 608 Enforcement Contact: EPA Region VI,  
Mail Code 6T-EC, First Interstate Tower at  
Fountain Place, 1445 Ross Ave., Suite 1200,  
Dallas TX 75202

Iowa, Kansas, Missouri, Nebraska

CAA 608 Enforcement Contact: EPA Region VII,  
Mail Code ARTX/ARBR, 726 Minnesota Ave.,  
Kansas City, KS 66101

Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

CAA 608 Enforcement Contact: EPA Region VIII,  
Mail Code 8AT-AP, 999 18th Street, Suite 500,  
Denver, CO 80202

American Samoa, Arizona, California, Guam, Hawaii, Nevada

CAA 608 Enforcement Contact: EPA Region IX,  
Mail Code A-3, 75 Hawthorne Street, San  
Francisco, CA 94105

Alaska, Idaho, Oregon, Washington

CAA 608 Enforcement Contact: EPA Region X,  
Mail Code AT-082, 1200 Sixth Ave., Seattle, WA  
98101

the equipment. However, persons "upstream" can remove the refrigerant and provide documentation of its removal to the final person if this is more cost-effective.

The equipment used to recover refrigerant from appliances prior to their final disposal must meet the same "performance standards" as equipment used prior to servicing, but it does not need to be tested by a laboratory. This means that self-built equipment is allowed as long as it meets the performance requirements. For MVACs and MVAC-like appliances, the performance requirement is 102 mm of mercury vacuum and for small appliances, the recover equipment performance requirements are 90 percent efficiency when the appliance compressor is operational, and 80 percent efficiency when the appliance compressor is not operational.

Technician certification is not required for individuals removing refrigerant from appliances in the waste stream.

The safe disposal requirements are effective on July 13, 1993. The equipment must be registered or certified with the Agency by August 12, 1993. A sample form is attached.

#### *Major Recordkeeping Requirements*

*Technicians* servicing appliances that contain 50 or more pounds of refrigerant must provide the owner with an invoice that indicates the amount of refrigerant added to the appliance. Technicians must also keep a copy of their proof of certification at their place of business.

*Owners* of appliances that contain 50 or more pounds of refrigerant must keep ser-

vic-ing records documenting the date and type of service, as well as the quantity of refrigerant added.

*Wholesalers* who sell CFC and HCFC refrigerants must retain invoices that indicate the name of the purchaser, the date of sale, and the quantity of refrigerant purchased.

*Reclaimers* must maintain records of the names and addresses of persons sending them material for reclamation and the quantity of material sent to them for reclamation. This information must be maintained on a transactional basis. Within 30 days of the end of the calendar year, reclaimers must report to EPA the total quantity of material sent to them that year for reclamation, the mass of refrigerant reclaimed that year, and the mass of waste products generated that year.

#### *Hazardous Waste Disposal*

If refrigerants are recycled or reclaimed, they are not considered hazardous under federal law. In addition, used oils contaminated with CFCs are not hazardous on the condition that:

- They are not mixed with other waste.
- They are subjected to CFC recycling or reclamation.
- They are not mixed with used oils from other sources.

Used oils that contain CFCs after the CFC reclamation procedure, however, are subject to specification limits for used oil fuels if these oils are destined for burning. Individuals with questions regarding the proper handling of these materials should

contact EPA's RCRA Hotline at 800-424-9346 or 703-920-9810.

### **Enforcement**

EPA is performing random inspections, responding to tips, and pursuing potential cases against violators. Under the Act, EPA is authorized to assess fines of up to \$25,000 per day for any violation of these regulations.

### **Planning and Acting for the Future**

Observing the refrigerant recycling regulations for section 608 is essential in order to conserve existing stocks of refrigerants, as well as to comply with Clean Air Act requirements. However, owners of equipment that contains CFC refrigerants should look beyond the immediate need to maintain existing equipment in working order. EPA urges equipment owners to act now and prepare for the phaseout of

CFCs, which will be completed by January 1, 1996. Owners are advised to begin the process of converting or replacing existing equipment with equipment that uses alternative refrigerants.

To assist owners, suppliers, technicians and others involved in comfort chiller and commercial refrigeration management, EPA has published a series of short fact sheets and expects to produce additional material. Copies of material produced by the EPA Stratospheric Protection Division are available from the Stratospheric Ozone Information Hotline (see hotline number below).

### **For Further Information**

For further information concerning regulations related to stratospheric ozone protection, please call the Stratospheric Ozone Information Hotline: 800-296-1996. The Hotline is open between 10:00 AM and 4:00 PM, Eastern Time.

## DEFINITIONS

<i>Appliance</i>	Any device which contains and uses a class I (CFC) or class II (HCFC) substance as a refrigerant and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller, or freezer. EPA interprets this definition to include all air-conditioning and refrigeration equipment except that designed and used exclusively for military purposes.
<i>Major maintenance, service, or repair</i>	Maintenance, service, or repair that involves removal of the appliance compressor, condenser, evaporator, or auxiliary heat exchanger coil.
<i>MVAC-like appliance</i>	Mechanical vapor compression, open-drive compressor appliances used to cool the driver's or passenger's compartment of a non-road vehicle, including agricultural and construction vehicles. This definition excludes appliances using HCFC-22.
<i>Reclaim</i>	To reprocess refrigerant to at least the purity specified in the ARI Standard 700-1988, Specifications for Fluorocarbon Refrigerants, and to verify this purity using the analytical methodology prescribed in the Standard.
<i>Recover</i>	To remove refrigerant in any condition from an appliance and store it in an external container without necessarily testing or processing it in any way.
<i>Recycle</i>	To extract refrigerant from an appliance and clean refrigerant for reuse without meeting all of the requirements for reclamation. In general, recycled refrigerant is refrigerant that is cleaned using oil separation and single or multiple passes through devices, such as replaceable core filter-driers, which reduce moisture, acidity, and particulate matter.
<i>Self-contained recovery equipment</i>	Recovery or recycling equipment that is capable of removing the refrigerant from an appliance without the assistance of components contained in the appliance.
<i>Small appliance</i>	Any of the following products that are fully manufactured, charged, and hermetically sealed in a factory with five pounds or less of refrigerant: refrigerators and freezers designed for home use, room air conditioners (including window air conditioners and packaged terminal air conditioners), packaged terminal heat pumps, dehumidifiers, under-the-counter ice makers, vending machines, and drinking water coolers.
<i>System-dependent recovery equipment</i>	Recovery equipment that requires the assistance of components contained in an appliance to remove the refrigerant from the appliance.
<i>Technician</i>	Any person who performs maintenance, service, or repair that could reasonably be expected to release class I (CFC) or class II (HCFC) substances into the atmosphere, including but not limited to installers, contractor employees, in-house service personnel, and in some cases, owners. Technician also means any person disposing of appliances except for small appliances.

**TABLE 2 ...**  
**MAJOR RECYCLING RULE COMPLIANCE DATES**

• Date after which owners of equipment containing more than 50 pounds of refrigerant with substantial leaks must have such leaks repaired.	June 14, 1993
• Evacuation requirements go into effect. • Recovery and recycling equipment requirements go into effect.	July 13, 1993
• Owners of recycling and recovery equipment must have certified to EPA that they have acquired such equipment and that they are complying with the rule. • Reclamation requirement goes into effect.	August 12, 1993
• All newly manufactured recycling and recovery equipment must be certified by an EPA-approved testing organization to meet the requirements in the second column of Table 1.	November 15, 1993
• All technicians must be certified. • Sales restriction goes into effect.	November 14, 1994
• Reclamation requirement expires.	May 14, 1995



United States  
Environmental Protection  
Agency  
(6205-J)  
Washington, DC 20460

Official Business  
Penalty for Private Use  
\$300