

Just the Facts: EPA Requirements and You

by MACS Staff

This brief overview of the rules of the game is excerpted from entries on the U.S. EPA web site. Extensive information on alternate refrigerants, approved equipment, and other topics are at www.epa.gov/ozone.

Ozone Layer

The ozone layer protects us from harmful ultraviolet (UV) radiation. Scientists believe that chemicals such as CFC-12 were rapidly destroying this layer of gas. Strong UV radiation breaks the CFC-12 molecules apart, releasing chlorine. Chlorine destroys ozone molecules.

Under the international treaty known as the Montreal Protocol, over 160 countries agreed to phase out production of most ozone-depleting substances, including CFCs, by the end of 1995. The 1990 Clean Air Act Amendments (the Act) incorporated this production ban date and directed EPA to develop regulations to maximize recycling, ban nonessential uses, develop labeling requirements and examine safe alternatives for ozone-depleting substances.

One of the largest uses of CFC-12 in the U.S. was as a refrigerant in motor vehicle air conditioners (MVACs). Section 609 of the Act gives EPA the authority to establish requirements to prevent the release of refrigerants during the servicing of MVACs and to require recycling of refrigerants.

Recycling means the use of a machine to remove impurities and oil and then recharge the refrigerant into either the same car or a different car. Recycled refrigerant is not as pure as reclaimed refrigerant.

Recycling occurs in the service shop. Reclamation means the removal of all oil and impurities beyond that provided by on-site recycling equipment. Reclaimed refrigerant is essentially identical to new, unused refrigerant. Reclamation cannot be performed in the service shop. Rather, the shop generally sends refrigerant either back to the manufacturer or directly to a reclamation facility.

CFC-12

Venting: Section 608 of the Clean Air Act prohibits releasing CFC-12 into the atmosphere. The prohibition on venting CFC-12 has been in effect since 1992.

Approved Equipment: Technicians repairing or servicing CFC-12 MVACs must use either recover/recycle or recover-only equipment approved by EPA.

Technician Training and Certification: Technicians who repair or service CFC-12 MVACs must be trained and certified by an EPA-approved organization. To be certified, technicians must pass a test demonstrating their knowledge in these areas.

Recordkeeping: Service shops must maintain records of the name and address of any facility to which refrigerant is sent. Service shops are also required to maintain records (on-site) showing that all service technicians are properly certified.

Certification: Service shops must certify to EPA that they have acquired and are properly using approved refrigerant recovery equipment.

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Sales: Since November 14, 1994, Section 609 has prohibited the sale of small cans of ozone-depleting refrigerants to anyone other than a certified technician.

HFC-134a

Venting: Section 608 of the Clean Air Act prohibits releasing HFC-134a into the atmosphere. The prohibition on venting HFC-134a has been in effect since November 1995.

Approved Equipment: Technicians repairing or servicing HFC-134a MVACs must use either recover/recycle or recover-only equipment approved by EPA.

Technician Training and Certification: Technicians who repair or service HFC-134a MVACs must be trained and certified by an EPA-approved organization. To be certified, technicians must pass a test demonstrating their knowledge in these areas. A technician already trained and certified to handle CFC-12 does not need to be recertified to handle HFC-134a.

Recordkeeping: Service shops must maintain records of the name and address of any facility to which refrigerant is sent. Service shops are also required to maintain records (on-site) showing that all service technicians are properly certified.

Certification: Service shops must certify to EPA that they have acquired and are properly using approved refrigerant recovery equipment. Note that this certification is a one-time requirement, so that if a shop purchased a piece of CFC-12 recycling equipment in the past, and sent the certification to EPA, the shop does not need to send a second certification to EPA when it purchases a second piece of equipment, no matter what refrigerant that equipment is designed to handle.

Sales: There is no restriction on the sale of HFC-134a, so anyone may purchase it.

Converting CFC-12 Equipment to HFC-134a: EPA regulations prohibit technicians from changing fittings on the same unit back and forth so that the unit is used for CFC-12 in the morning, HFC-134a in the afternoon, then back to CFC-12 again, etc.

CFC-12 equipment may be permanently converted for use with HFC-134a under certain conditions. The retrofitted unit must meet SAE standard J2210 and must have the capacity to purify used refrigerant to SAE standard J2099 for safe and direct return to the air conditioner following repairs.

Other Substitutes

Venting: Other than HFC-134a, all EPA-accepted refrigerants that substitute for CFC-12 in motor vehicles [...] are blends that contain ozone-depleting HCFCs. Section 608 of the Clean Air Act prohibits venting any of these substitutes into the atmosphere. The prohibition on venting these ozone-depleting blends has been in effect since 1992.

Approved Equipment: Technicians have a number of choices in recovering blend refrigerants. One option is to permanently dedicate an older piece of equipment to recovering one or more blend refrigerants. The technician may also use this equipment to recover contaminated CFC-12 and HFC-134a and other "mystery mixtures." This equipment, however, may no longer be used to recover uncontaminated CFC-12 or HFC-134a. Refrigerant recovered using this kind of "junk" tank must then be shipped offsite for reclamation or destruction.

Another option for recovering a blend refrigerant is to use a new

piece of EPA-approved equipment designed to recover, but not recycle, any single, specific blend refrigerant.

As of June 1, 1998, EPA allows recycling of refrigerant blends used in motor vehicle air conditioning systems, provided that a) recycling equipment meets Underwriters Laboratories (UL) Standard 2964 and, b) refrigerant is returned to the vehicle from which it was removed. The only exception to item b) is for fleets of vehicles with a common owner. Recycled blend refrigerant may be moved among vehicles within such a fleet.

EPA prohibits the conversion of existing CFC-12 or HFC-134a recycling equipment for either temporary or permanent use with a blend refrigerant, unless the equipment is used only to recover, but not to recycle, the refrigerant.

Technician Training and Certification: Technicians who repair or service MVACs that use blend refrigerants must be trained and certified by an EPA-approved organization. To be certified, technicians must pass a test demonstrating their knowledge in these areas. A technician already trained and certified to handle CFC-12 or HFC-134a does not need to be recertified to handle a blend refrigerant.

Recordkeeping: Service facilities that work on vehicles that use blend substitutes must certify to EPA that they own approved equipment designed to service these refrigerants. Note that this certification is a one-time requirement, so that if a shop purchased a piece of CFC-12 or HFC-134a recycling equipment in the past, and sent the certification to EPA, the shop does not need to send a second certification to EPA when it purchases a second piece of equipment, no matter what refrigerant that equipment is designed to handle. If refrigerant is recovered and sent to a reclamation facility, the shop must retain the name and address of that reclaimer.

Sales: Since November, 1994, Section 608 regulations prohibit the sale of any size container of any blend refrigerant to anyone other than a certified technician.

Retrofitting Vehicles

Although section 609 of the Act does not govern retrofitting, Section 612 of the Act [...] requires that when retrofitting a CFC-12 vehicle for use with another refrigerant, the technician:

- must first extract the CFC-12,
 - must cover the CFC-12 label with a label that indicates the new refrigerant in the system and other information, and
 - must affix new fittings unique to that refrigerant.
- If the system includes a pressure relief device, the technician must install a high-pressure compressor shutoff switch to prevent the compressor from increasing pressure until the refrigerant is vented.
- In addition, if a technician is retrofitting a vehicle to a refrigerant that contains R-22, the technician must ensure that only barrier hoses are used in the A/C system.

Enforcement

Field citations assessing civil penalties not to exceed \$5,000 per day of violation may be issued by officers or employees designated by the Administrator.

The Administrator shall, as appropriate, [...] commence a civil action for a permanent or temporary injunction, or [...] a civil penalty of not more than \$32,500 per day for each violation, or both.



Section 609 Certification for Refrigerant Recovery and Recycling

\$20
per test

Technicians opening the refrigeration circuit in automotive air conditioning systems are required to be certified in refrigerant recovery and recycling in compliance with Section 609 of the Clean Air Act Amendments of 1990. The MACS certification program is approved by the U.S. EPA under this act. Wisconsin has additional certification requirements.

To order the study manual and test:

Visit www.macsw.org

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Tests available in English or Spanish. Please specify which tech(s) needs Spanish.

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Answer To Section 609 Frequently Asked Questions

1. Section 609 certification is a requirement of the United States Clean Air Act of 1990 and not valid in any other country. It is a requirement for purchasing R-12 refrigerant and recovering all mobile A/C refrigerants. The state of Wisconsin has additional requirements for technicians working with mobile A/C systems.
2. The fee for a MACS Home Study Section 609 Certification test is \$20. Payment must be made before a test will be issued for home study.
3. Section 609 certification is good for life under current U.S. law and no recertification is currently required.
4. If credentials are lost they may be replaced for a \$10 fee provided MACS has the individual's certification record on file.
5. Tests are available in English and Spanish.
6. Please allow 10-14 days for processing and mail delivery.



(More information available at www.macsw.org)

To request Section 609 certification tests, please fill out the following information and return to MACS Worldwide with payment. You may mail, fax or email this form but it must be accompanied by \$20 for each test requested.

\$20 per test

1st Tech: _____ Email address: _____ \$20 per Certification Test
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 \$10 MACS Membership*

(Attach list if necessary)

* See other side for Membership Details

Shop / Company Name _____

Mailing address: _____ City/State/Zip: _____

Area Code/Phone: _____ Fax: _____

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