



SPECIAL BULLETIN

DECEMBER 2017

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United States Clean Air Act

MACS Section 609 Refrigerant Recycling and Recovery Certification Program

Effective 1/1/2018 Certification is required to repair or service CFC-12, HFC-134a and CO2, HFC-152a, or HFO-1234yf MVACs and to purchase refrigerant.

I hope you find the following information useful.

You can get both trained and certified on line.

Please keep in mind. If you were NEVER certified you must be. If you have been certified and have LOST your card, you must be re-certified (this applies to everyone). If you have been certified and still have possession of your card you are OK.

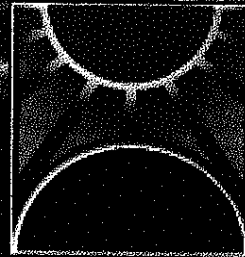
Enclosed you will find:

1. Information regarding Section 609 of the Clean Air Act: Motor Vehicle Air Conditioning.
2. A list of EPA approved companies and programs that train and certify individuals to be in compliance.
3. Information from ASE, which is one of the approved companies, on their refrigerant recovery and recycling program.

If you need further assistance please contact the association.

Regards,
Carla Obalde
Operations Manager

Section 609 of the Clean Air Act: Motor Vehicle Air Conditioning



Protecting the Ozone Layer

The stratospheric ozone layer shields the Earth from the sun's harmful ultraviolet radiation. Emissions of certain substances – including chlorofluorocarbons (CFCs), halons, and hydrochlorofluorocarbons (HCFCs) – that are commonly used as refrigerants, solvents, and insulating foams destroy the ozone layer.

In addition, many of these ozone-depleting substances (ODS), as well as their alternatives – including hydrofluorocarbons (HFCs) – are potent greenhouse gases that contribute to climate change. The purpose of this fact sheet is to help understand the regulatory requirements for servicing motor vehicle air conditioners (MVACs).

Environmental Impact of Motor Vehicle Air Conditioners

Older model MVACs used CFC-12 (also known by trade names, such as Freon®). When CFCs leak from MVACs into the atmosphere, strong radiation in the atmosphere will break the molecules apart and release chlorine atoms, each of which can destroy over 100,000 ozone molecules.

MVACs can have serious impacts on climate. For example, the global warming potential (GWP) of CFC-12 is approximately 10,000 times greater than that of carbon dioxide (CO₂), a greenhouse gas that contributes to climate change. Currently, most MVACs use HFC-134a (also known as R-134a), a refrigerant that does not deplete the ozone layer, but has a GWP that is approximately 1,400 times greater than CO₂.

| Refrigerant | Global Warming Potential | Ozone Depletion Potential |
|-----------------|--------------------------|---------------------------|
| CFC-12 | 10,900 | 1 |
| HFC-134a | 1,430 | 0 |
| HFC-152a | 124 | 0 |
| HFO-1234yf | 4 | 0 |
| CO ₂ | 1 | 0 |

Alternative refrigerants such as CO₂ and hydrofluoroolefin (HFO)-1234yf do not deplete the ozone layer and have much lower GWPs than CFC-12 or HFC-134a. CO₂ has a GWP of 1 and HFO-1234yf has a GWP of 4. MVACs alone represent about 15% of the global use of HFCs.

Because of the potential damage that refrigerants can do to the environment, Section 609 of the Clean Air Act (CAA) directs EPA to establish requirements to prevent the release of refrigerants during the servicing of MVACs and MVAC-like appliances and to require recycling of used refrigerants. MVAC-like appliances are 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.

608 vs. 609

MVAC (609)

Passenger cars



Buses*



Trucks



MVAC-like (609 or 608)

Off-road vehicles



Non-MVAC (608)

Trains



Aircraft – passenger & cargo



Refrigerated trailers



Ship/boat – passenger & cargo

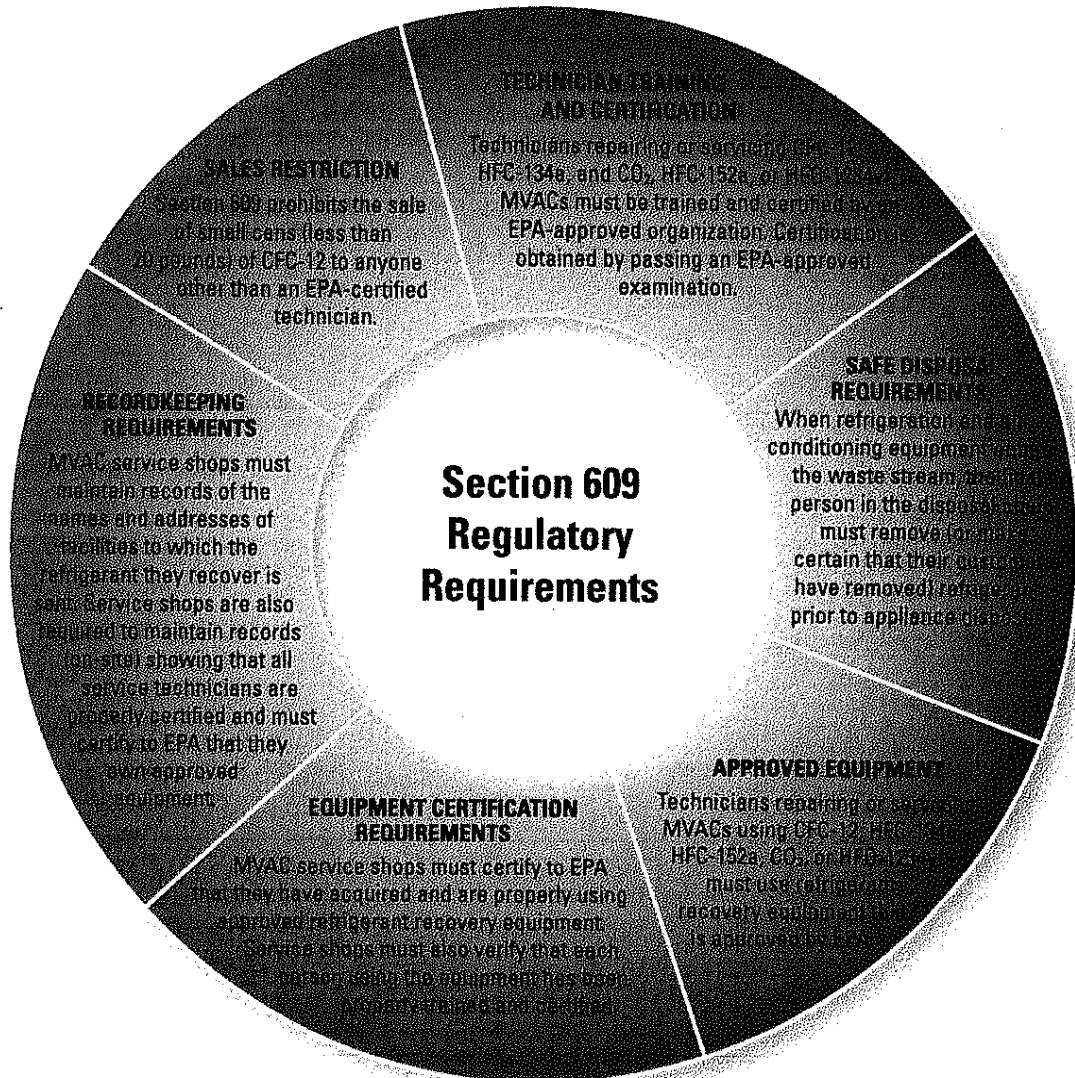


609 Refrigerants

Venting Prohibition

Section 608 prohibits intentionally releasing (also called venting) ODS refrigerants and most alternatives (including all HFCs, HFOs, and their blends) while maintaining, servicing, repairing, or disposing of MVACs and MVAC-like equipment. CO₂ refrigerants are exempted from the venting prohibition.

Section 609 Regulatory Requirements: Motor Vehicle Air Conditioning



Additional Resources

EPA Ozone Layer Protection Website:
epa.gov/ozone/strathome.html

EPA Section 609 Website:
epa.gov/ozone/title6/609/

EPA Phaseout of Ozone-Depleting Substances Website:
epa.gov/ozone/title6/phaseout/

Approved equipment information website:
epa.gov/ozone/title6/609/technicians/appequip.html

EPA Stratospheric Ozone Information Hotline: 1-800-296-1996

We've made some changes to EPA.gov. If the information you are looking for is not here, you may be able to find it on the EPA Web Archive or the January 19, 2017 Web Snapshot.



Section 609 Technician Training and Certification Programs

Any person who repairs or services a motor vehicle air conditioning (MVAC) system for consideration (payment or bartering) must be properly trained and certified under section 609 of the Clean Air Act by an EPA-approved program. All technicians servicing MVAC-like appliances must be certified.

EPA-approved technician training and certification (TT&C) programs provide education on the proper use of MVAC servicing equipment, the applicable regulatory requirements, the importance of refrigerant recovery, as well as the effects of improper handling of refrigerants on the ozone layer and climate. To be certified, technicians must be trained by an EPA-approved program and pass a test demonstrating their knowledge in these areas.

The following companies and programs are approved by EPA to train and certify individuals under section 609 of the Clean Air Act. Please contact the programs directly for specific information.

The following links exit the site EXIT

| |
|---|
| Section 609 TT&C Programs |
| <u>AM General Corporation</u> |
| <u>ASE (National Institute for Automotive Service Excellence)</u> |
| <u>ESCO Institute</u> |
| <u>Ferris State University (FSU)</u> |
| <u>The Greater Cleveland Automobile Dealers' Association</u> |
| <u>KPA</u> |

| |
|---|
| Section 609 TT&C Programs |
| <u>Mainstream Engineering Corporation</u> |
| <u>Metro Atlanta Automobile Dealers Association</u> |
| <u>Mobile Air Conditioning Society (MACS) Worldwide</u> |
| <u>New York State Association of Service Stations and Repair Shops, Inc.</u> |
| <u>Texas A&M Engineering Extension Service (TEEX)</u> |
| <u>Universal Technical Institute</u> |
| <u>Wyoming Technical Institute</u> |
| Section 609 TT&C Programs Intended Specifically for Their Own Employees |
| <u>Jiffy Lube International</u> |
| <u>Los Angeles County Metropolitan Transportation Authority</u> |
| <u>U.S. Department of Defense (Department of the Army, U.S. Army Ordnance Mechanical Maintenance School)</u> |
| <u>U.S. Department of Defense (United States Marine Corps, Motor Transport Maintenance Instructional Company)</u> |
| <u>Whayne Supply Company</u> |

Note to refrigerant retailers:

The following companies formerly offered Section 609 TT&C programs, and retailers should continue to accept Section 609 TT&C cards from them:

E F Technical Institute, Inc.; Geneva Steel; The International Mobile Air Conditioning Association (IMACA)*; Marine Safety Consultants/Tidewater School of Navigation; Mechanic's Education Association; Minnesota Department of Transportation; New York State Department of Motor Vehicles; Pennsylvania College of Technology;

Penske Auto Centers (formerly K-Mart); Rancho Santiago College; Refrigerant Certification Services; Ryder Trucks; Snap-On; The Refrigeration School; Vatterott College; and Waco Chemicals, Inc.

*The Mobile Air Conditioning Society (MACS) Worldwide maintains IMACA's technician certification records.

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Quicklinks

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Refrigerant Recovery and Recycling Program

The EPA-Authorized Section 609 program that's required if you service mobile A/C systems.

Technicians who service motor vehicle air conditioners must be trained and tested through a U.S. EPA-authorized organization, such as ASE. Training programs must cover the use of recycling equipment in compliance with industry standards, regulatory requirements, refrigerant containment, and the effects on the environment. To be certified, technicians must review the training material thoroughly and then pass a test demonstrating their knowledge of the training material.

The certificate earned as a result of a passing score on the refrigerant quiz is only deemed as certification in the context of the EPA. This credential is not the equivalent of technical certification from the ASE certification program.

You can take the ASE Refrigerant Recovery and Recycling Program two different ways:

- The most convenient method is online; click here to go to the ASE Campus website. If you complete the online program and pass the quiz, you may immediately print a 60-day temporary credential.
- Using a printed booklet, you mail your completed quiz to ASE and \$19 payment (quizzes not accepted via fax). It normally takes several weeks for mailed quizzes to be graded and to receive your credentials.

If you prefer to use the printed booklet, you can order copies at no cost. Printed booklets include a copy of the quiz. You only pay when you send in a completed quiz for scoring. Please note that each quiz returned for scoring must bear original marks on the answer sheet. Photocopies and faxes of completed sheets will not be accepted. Click here to request booklets.

The online ASE Refrigerant Recovery and Recycling Program matches the content found in the 2017 version of the printed booklet. You may also use 2015 and 2016 versions of the booklet to prepare for the quiz. Do not use any booklet version prior to 2015. To review the 2017 booklet, download a PDF version here.

The ASE Refrigerant Recovery and Recycling Review and Quiz is an EPA-approved program that meets Section 609 regulations from the Clean Air Act Amendments of 1990. This program is intended only for technicians servicing motor vehicle air conditioning (MVAC) systems. Under no circumstances should this program be considered as acceptable for Section 608 compliance, a separate requirement that applies to the servicing of other types of air conditioning systems. Also, some state and local jurisdictions have adopted their own credential requirements; check with your state and local authorities for details.

If you aren't sure whether the air conditioning work you do is covered under Section 609, click here to review an application fact sheet from the U.S. EPA.