



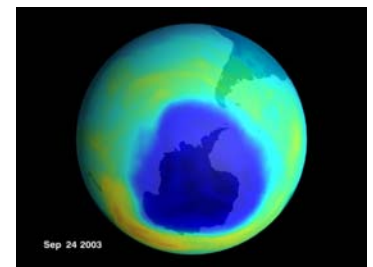
Overview of EPA Refrigerant Regulations

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Overview of Presentation

- The Montreal Protocol and the Clean Air Act amendments of 1990
- What is an ODS?
- Refrigerant Recycling Requirements
 - Venting Prohibition
 - Certification Requirements & Refrigerant Sales Restriction
 - Service Requirements & Leak Repair
 - Enforcement



What are ozone-depleting substances?

EPA regulates class I and class II ozone-depleting substances (ODS)

- Refrigerants: CFCs and HCFCs (R-11, R-12, R-22, R-123)
- Solvents (R-113, methyl chloroform, carbon tetrachloride)
- Pesticide (MeBr)
- Fire suppression agents (halons)

NOTE: hydrofluorocarbon refrigerants are not listed (for example, R-410A, R-134a)



The Montreal Protocol

The Montreal Protocol on Substances That Deplete the Ozone Layer (Montreal Protocol) is a landmark international agreement designed to protect the stratospheric ozone layer. The treaty was originally signed in 1987 and substantially amended in 1990, 1992, and 1997.

The Montreal Protocol stipulates phaseout schedules for the production and consumption of compounds that deplete ozone in the stratosphere.



The Clean Air Act

- Amended in 1990 to include Title VI – Protection of the Stratospheric Ozone Layer

- Section 608 – Requires EPA to establish standards and requirements reducing the use and emissions and maximize the recovery and recycling of ODS during the service, repair, or disposal of appliances and industrial process refrigeration equipment
 - Prohibits the intentional release of ODS and their substitutes during the maintenance, service, repair, or disposal of refrigeration and air conditioning equipment
 - Directs EPA to establish requirements to reduce use and emissions of ozone-depleting substances and their substitutes during the servicing, repair, or disposal of appliances and industrial process refrigeration equipment
 - May require the use or promotion of substitutes or requirements minimizing the use of ODS
 - Safe disposal requirements for the disposal of appliances



The Clean Air Act

Section 609 – Directs EPA to establishes service requirements to reduce emissions of ODS refrigerants and their substitutes during the service of motor vehicle air conditioners

- Requires technicians to be trained and certified and properly use refrigerant recycling equipment
- Requires service companies to certify that they have and will properly use recovery equipment
- Prohibits the sale of any class I or class II substance that is suitable for use as a refrigerant in a motor vehicle air-conditioning system in a container size less than 20 pounds



Section 608 Regulations

- Under Section 608 of the CAA, EPA has written regulations (40 CFR Part 82, Subpart F) that
 - Prohibit the intentional release of ODS refrigerants and their substitutes during service, maintenance, or disposal events
 - Require service practices that maximize recycling of ozone-depleting substances during the service 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



Section 608 of the Clean Air Act (cont'd)

- 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)



Refrigerant Venting Prohibition

- Illegal to intentionally release any refrigerant or **substitute** into the atmosphere during service, maintenance, repair, or disposal of a/c or refrigeration equipment

Yes, it is illegal to vent R-134a and R-410A during a service call!



Technician Certification

- Federal mandate for any type of repair or service on a refrigerated appliance
 - Type I – small appliances (refrigerators, window a/c)
 - Type II – med-high pressure (residential R-22 systems)
 - Type III – low pressure (R-11 chiller)

- EPA approved certifications never expire

- Grandfathering for technicians certified under voluntary programs ended in 1995

- Testing must be performed by an EPA-certified testing organization



Technician Certification (cont'd)

- Not required for disposal of small appliances
- The disposer must make certain that all refrigerant has been recovered prior to shredding, dismantling, etc.
- Does not apply to systems using non-ODS alternatives in the stationary sector (for example, R-410A, R-134a, R-404A)



Upcoming Rule Changes for Certifying Programs

2008 - Notice of Proposed Rulemaking

- Proctor certification
- Exam stocking
- Annual reporting
- Reporting & Recordkeeping requirements
- On-line testing
- Type I certification updates



Refrigerant Sales Restriction

- Statutory under Sect. 609 of the Clean Air Act-restricts sales of CFC refrigerants in small quantities to Sect. 609 (i.e., motor vehicle air conditioning) technicians
- Under Sect. 608 EPA has extended the sales restriction to ODS in all size containers
- Sales of refrigerant blends containing HCFCs are restricted (e.g., FRIGC FR-12, Free Zone, Hot Shot or R-414B, GHG-X4 or R-414A, Freeze 12)
- Pre-charged parts are **LEGAL** to sell without certification
- USED ODS refrigerant cannot be resold to a new owner without being reclaimed by an EPA-certified refrigerant reclaimer



Other Certification Requirements

- Service companies and in-house techs/contractors must certify to EPA that they have EPA-certified recovery/recycling equipment
- Manufacturers of recovery/recycling equipment must certify their equipment meets ARI 740 specifications NOT technicians
- Reclaimers are required to return refrigerant to the purity level specified in ARI Standard 700 (an industry-set purity standard) and to verify this purity using the laboratory protocol set forth in the same standard NOT technicians.



Leak Repair Requirements

- Refrigeration and a/c systems with charge sizes greater than 50 lbs
 - Industrial process refrigeration
 - Commercial refrigeration
 - Comfort cooling a/c

- Must repair within 30 days
 - Or convert to non-ODS
 - Or retire within 1 year

- Leak repair is the responsibility of the equipment owner/operator NOT the technician



Recordkeeping & Reporting Requirements

- Technicians must keep copy of certification card at their place of business

- Technicians must provide service record to their customers
 - Date and type of service
 - Amount of refrigerant added to the system

- Service companies or companies with in-house service personnel must certify to their EPA regional office
 - You have EPA certified refrigerant recovery/recycling equipment
 - You will properly use such equipment



Urban Legends, Myths, and Misunderstandings

- I can get a \$10,000 reward for turning in my employer, former best friend or spouse
- EPA has a database of technicians so they can replace my lost tech cert card
- It is okay to vent HFC refrigerants such as R-134a and R-410A
- All junior level techs are considered apprentices



Urban Legends, Myths, and Misunderstandings (cont'd)

- EPA is responsible for the SEER-13 standard
- EPA is responsible for the CFC excise tax
- EPA is issuing a tax on HCFC and HFC refrigerants
- There is no enforcement of the refrigerant regulations
- EPA will ban the use of R-22 after 2010
- Environmentally safe refrigerants are on the market for use in residential and commercial uses



STOP VENTING!!!!

- R-22 is being phased out
- Its value will increase in the future
- Help avoid shortages and protect the environment by recovering and reusing
- Save your customers money by avoiding top-offs

Need more info on the Phaseout?

www.epa.gov/ozone/title6/phaseout



Things to tell newly trained technicians

- Don't intentionally vent any refrigerant
- Use recovery equipment
- Properly dispose of small appliances
- Don't carry your cards in your wallet
- Avoid topping off leaking systems
- EPA has not banned the use of R-22 equipment
- Verify what you read or hear
 - www.epa.gov/ozone
 - (800) 296-1996



Closing

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