

The EPA's Updated Refrigerant Management Requirements

What Supermarkets and Property and Facility Managers Need to Know



What are the Section 608 regulations?

Section 608 of the Clean Air Act prohibits the knowing release of refrigerant during the maintenance, service, repair, or disposal of air-conditioning and refrigeration equipment. The EPA requires proper refrigerant management practices by owners and operators of refrigeration and air-conditioning systems, technicians, and others.

What's changing in these regulations?

In the fall of 2016, the EPA updated the existing requirements related to ozone-depleting substances (ODS), such as CFCs and HCFCs, and extended them to substitutes such as HFCs.¹ The updates include:

- More stringent requirements for repairing leaks in larger appliances;
- New recordkeeping for the disposal of appliances containing five to 50 pounds of refrigerant;
- New reporting requirement that kicks in when larger appliances leak 125% or more of their charge in a calendar year;
- Restricting the sale of HFC refrigerant to technicians certified under Sections 608 or 609 of the Clean Air Act; and
- Changes to improve readability and simplify compliance.

In addition to protecting the ozone layer, the EPA estimates that the updated requirements will decrease annual greenhouse gas emissions by **7.3 million MTCO₂e**—that's equivalent to taking 1.5 million cars off the road per year.

How will the new requirements affect supermarkets and property and facility managers?

This fact sheet summarizes both the existing leak repair requirements and the revised requirements that will take effect **January 1, 2019**.²

Affected Appliances

The leak repair regulations apply to industrial process refrigeration (IPR), commercial refrigeration, and comfort cooling appliances containing 50 pounds or more of ODS or substitute refrigerant.

Leak Rate Calculations

Owners/operators must calculate the leak rate every time ODS or substitute refrigerant is added to an appliance (unless the addition is made immediately following a retrofit, installation of a new appliance, or qualifies as a seasonal variance).

Appliance Repairs

- Owners/operators must identify and repair leaks that exceed 30% for IPR, 20% for commercial refrigeration, and 10% for comfort cooling within 30 days of when the ODS or substitute refrigerant is added. Leaks must be repaired such that the leak rate is brought below the applicable leak rate.

¹ These regulations do not extend to substitutes that have been exempted from the venting prohibition, such as ammonia.

² This fact sheet highlights select changes that may be of most interest to this community. Please see the regulations for the full changes/requirements.

- Owners/operators of all three appliance types must perform and document both an initial and follow-up verification test of leak repairs, for appliances that exceed the applicable leak rate.
 - An **initial verification test** must be performed before any additional refrigerant is added to the appliance.
 - A **follow-up verification test** must be performed only after the appliance has returned to normal operating characteristics and conditions. There is no minimum timeframe.
- The verification tests must demonstrate that leaks were successfully repaired. If either the initial or follow-up verification test indicates that repairs were not successful, owners/operators may conduct as many additional repairs and verification tests as needed within the 30 day repair period.
- Owners/operators of IPR, commercial refrigeration, and comfort cooling equipment may request limited extensions to the 30 day (120 days if an industrial process shutdown is required) repair deadline.
- If owners/operators fail to bring the leak rate below the threshold leak rate, owners/operators must create and implement a retrofit or retirement plan.

Leak Inspections

- Owners/operators must conduct leak inspections for appliances that have exceeded the applicable leak rate, according to the schedule in Table 1. Leak inspections must be conducted by a certified technician. All visible and accessible components of an appliance must be inspected.

Table 1: Leak Inspection Requirements

Equipment	Full Charge	Frequency of Leak Inspections
Commercial Refrigeration and Industrial Process Refrigeration	> 500 pounds	<i>Once every three months</i> until the owner/operator can demonstrate through leak rate calculations that the leak rate has not exceeded 20% (commercial refrigeration) or 30% (IPR) for four quarters in a row.
	50 to 500 pounds	<i>Once per calendar year</i> until the owner/operator can demonstrate through the leak rate calculations that the leak rate has not exceeded 20% (commercial refrigeration) or 30% (IPR) for one year.
Comfort Cooling	50 or more pounds	<i>Once per calendar year</i> until the owner/operator can demonstrate through the leak rate calculations that the leak rate has not exceeded 10% for one year.

- Quarterly or annual leak inspections are not required on appliances (or portions of appliances) that are continuously monitored by an automatic leak detection system that is audited and calibrated annually.

Retrofit or Retirement Plans

- Owners/operators must create a retrofit or retirement plan within 30 days³ of an appliance leaking ODS or substitute refrigerant above the applicable leak rate if:
 - The owner/operator intends to retrofit or retire rather than repair the leak; or
 - The owner/operator fails to identify and repair the leak; or
 - The appliance continues to leak above the applicable leak rate after required repairs and verification tests.
- Retrofit or retirement plans must contain: identification and location of the appliance; type and full charge of the refrigerant in use; type and full charge of alternative refrigerant (if retrofitting); itemized procedure for converting the appliance to a different refrigerant, including changes required for compatibility with the new refrigerant (if retrofitting); plan for disposition of recovered refrigerant; plan for disposition of the appliance (if retiring); and a schedule for completion within one year.

³ Some extensions may be available, particularly for industrial process refrigeration.

- The retrofit or retirement must be completed within one year of the plan's date unless granted extra time.
- Owners/operators must repair all identified leaks as part of any retrofit.
- Owners/operators may request relief from the obligation to retrofit or retire an appliance if they can establish within 180 days of the plan's date that the appliance no longer exceeds the applicable leak rate and agrees in writing to repair all identified leaks within one year of the plan's date.

Chronically Leaking Appliances

- Owners/operators must submit reports to the EPA if any appliance leaks 125% or more of its full charge in one calendar year. This report must describe efforts to identify leaks and repair the appliance.

Recordkeeping and Reporting Requirements

Owners/operators must maintain hard or electronic copies⁴ of:

- Records documenting the full charge of appliances.
- Records, such as invoices, showing when service or maintenance is performed, when refrigerant is added to an appliance (or removed, in the case of disposal), when a leak inspection is performed, and when a verification test is conducted.
- If using an automatic leak detection system, documentation that the system is installed and calibrated annually and records of when the monitoring system identifies a leak and the location of the leak.
- Retrofit and/or retirement plans.
- Requests submitted to the EPA to extend the repair or retrofit deadlines.
- If a system is mothballed to suspend a deadline, maintain records documenting when the system was mothballed and when it was brought back on-line (i.e., when refrigerant was added back into the appliance).
- Records to demonstrate a seasonal variance.
- Reports on appliances that leak 125% or more of the full charge in a calendar year.

Reporting to the EPA

All notifications must be submitted electronically to 608reports@epa.gov.

If the notification contains confidential business information, the information should be submitted to:

Section 608 Program Manager
Stratospheric Protection Division
Mail Code: 6205T
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Additional Resources

Update to the Refrigerant Management Requirements Final Rule:

www.epa.gov/section608/revised-section-608-refrigerant-management-regulations

The EPA's Section 608 Webpage: www.epa.gov/section608

The EPA Stratospheric Ozone Contact: spdcomment@epa.gov



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⁴ The EPA encourages electronic recordkeeping.