



# EPA Section 608 Update Refrigerant Compliance Checklist

---

THE LATEST INSIGHTS ON EPA 608'S LEAK REPAIR PROVISIONS





## EPA Section 608 Refrigerant Compliance

For the EPA Refrigerant Recycling and Emissions Reduction Program, it's important to understand what's required. This document outlines the key requirements for equipment owners across the entire HVAC/R sector.

Compliance with evolving legislation can be demanding while also ensuring product quality and the safety of colleagues and customers, reducing operating expense and improving margins, while striving for 24/7/365 equipment uptime.

That's why we've summarized the EPA regulations in a handy checklist for you, so you can focus on your operation while we focus on helping you reduce your refrigerant emissions.

The EPA Refrigerant Recycling & Emissions Reduction Program defines:

- ✓ Robust record keeping
- ✓ Leak rate calculations
- ✓ Equipment leak thresholds
- ✓ Leak repair time frames
- ✓ Leak inspection requirements
- ✓ Retrofit and retirement timescales
- ✓ Chronically leaking appliance reporting

**Note:** Effective April 10, 2020, appliances with 50 or more pounds of substitute refrigerants are no longer subject to the requirements at 40 CFR 82.157, including:

- ✓ Repairing appliances that leak above a certain level and conducting verification tests on repairs
- ✓ Periodically inspecting for leaks
- ✓ Reporting chronically leaking appliances to the EPA
- ✓ Retrofitting or retiring appliances that are not repaired
- ✓ Maintaining related records



In the US, the EPA National Recycling & Emissions Reduction Program sets the base level requirements to which all refrigerant users must comply. There are also an increasing number of state-specific regulations that require increased record keeping, reporting standards or swifter response times. If you are an enterprise operating across multiple states, different sites may need to comply with different legislation. There are also voluntary bodies and partnerships that provide best practices, resources, recognition and certification of sustainability in the refrigerant management domain.



## **01** Robust record keeping

Appliance owners have robust record keeping requirements for appliances, servicing, refrigerant addition and repairs.

For all appliances with **50 or more pounds** of refrigerant, the following records are required:

- ✓ Identity and location of appliance within the site
- ✓ Owner / operator of the appliance
- ✓ Address of the site where the appliance is located
- ✓ Full charge of the appliance, how the full charge is calculated and any supporting records
- ✓ Any changes to the full charge value, date of change and method used

For work carried out on any appliance with **50 or more pounds of Class I and Class II refrigerants**, the following records are required:

- ✓ Records documenting date and type of service
- ✓ Invoice or other documentation stating the amount and type of refrigerant added to the appliance and the date it was applied
- ✓ Date, type and result of the initial and follow-up verification tests must be recorded

For appliances with **5 or more pounds** of refrigerant where refrigerant is being removed, the technician must keep the following records:

- ✓ The date of recovery
- ✓ The type and quantity of each refrigerant recovered
- ✓ The person to whom the refrigerant was transferred, and the date of transfer
- ✓ The fate of the refrigerant - reclamation or destruction

NOTE:

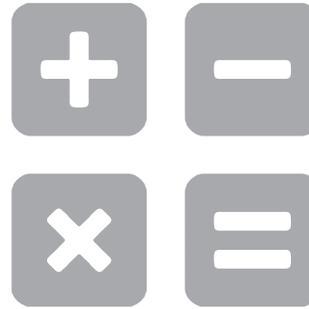
All records must be kept for a minimum of 3 years.



# 02 Leak rate calculations

Every time refrigerant is added to an appliance, a re-calculation of the leak rate must be carried out.

Owners or operators of appliances that contain 50 or more pounds of non-exempt substitute refrigerant must calculate the leak rate when refrigerant is added to the appliance. The EPA provide two methods of calculation and you should adopt one method for your enterprise.



## Annualizing method

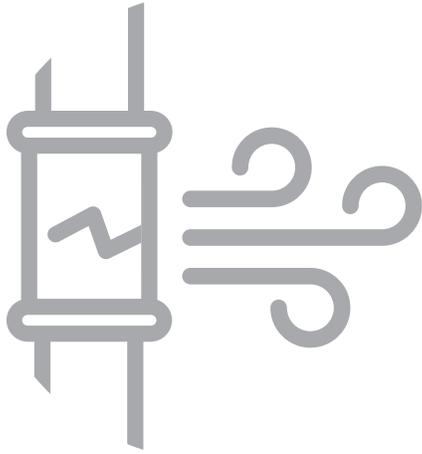
The EPA outlines the following method:

$$\text{Leak rate (\% per year)} = \frac{\text{pounds of refrigerant added}}{\text{pounds of refrigerant in full charge}} \times \frac{365 \text{ days / year}}{\text{shorter of \#days since refrigerant last added or 365 days}} \times 100\%$$

## Rolling average method

The EPA rolling average method is calculated as:

$$\text{Leak rate (\% per year)} = \frac{\text{pounds of refrigerant added over past 365 days}}{\text{pounds of refrigerant in full charge}} \times 100\%$$



## 03

### Equipment leak thresholds

If the amount of refrigerant added exceeds the applicable allowable leak rate, defined by the type of equipment, the leak Class I and Class II refrigerant only, must be repaired or the appliance retrofitted or retired.

The EPA 608 equipment categories and leak thresholds reduce to:

- ✓ 30% industrial process refrigeration
- ✓ 20% commercial refrigeration equipment
- ✓ 10% comfort cooling appliances
- ✓ 10% for other appliances



## 04

### Leak repair time frames

Repairs, inspections and verifications for Class I and Class II refrigerant only, must be completed within 30 days for commercial applications or 120 days for industrial process refrigeration.

Within the 30 day time frame, you must carry out:

- ✓ Leak inspection
- ✓ Repair any leaks found
- ✓ Initial verification of repairs (carried out before any additional refrigerant is added)
- ✓ Follow up verification of repairs (within 10 days of initial verification and carried out at operating conditions)

All servicing must be completed by technicians with appropriate certification. For further information on Section 608 Technician Certification, please see:

 <https://www.epa.gov/section608/section-608-technician-certification-0>

## 05 Leak inspection requirements

If the appliance exceeds the applicable allowable leak rate, leak inspections are due on Class I and Class II refrigerants only. All leak inspections must be carried out by a certified technician.

### For commercial or industrial applications:

- ✓ If the equipment charge >500 pounds, inspections are required once every 3 months
- ✓ If the equipment charge is between 50 and 500 pounds, inspections are required every 12 months

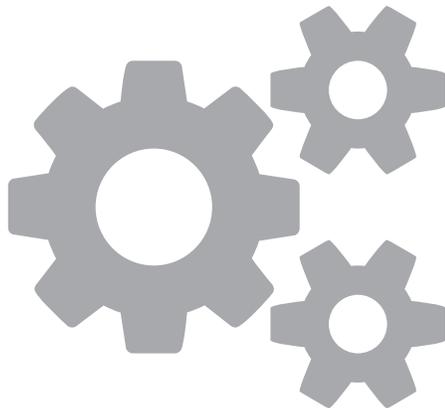
### For comfort cooling applications:

- ✓ If the equipment charge is over 50 pounds, inspections are required every 12 months

NOTE: Inspections are not required for appliances or portions of appliances covered by automated leak detection, calibrated every 12 months.



## 06 Retrofit & retirement timescales



If repairs do not bring the appliance under the target threshold, the appliance must be retrofitted or retired with specific target deadlines.

- ✓ Retrofit / retirement plans are due within 30 days of the decision to retire or retrofit. There are specific rules on what must be included
- ✓ All work to deliver the retrofit or retirement plan must be completed within 1 year of the plan creation date



## 07 Chronically leaking appliance reporting

Equipment with Class I and Class II refrigerants only, and with leak rates over 125% are classed as 'chronically leaking' and must be reported to the EPA.

- ✓ Chronically leaking equipment that leaks 125% or more of its full charge in 12 months must have a report submitted to the EPA by the owner / operator
- ✓ The report should describe actions to identify leaks and repair them
- ✓ The report must be submitted by March 1<sup>st</sup> of the subsequent year





# For refrigerant compliance call for a consultation now

Our vision is to empower teams to effortlessly collaborate to achieve compliance and become leaders of environmental sustainability.

Bacharach's **Refrigerant Detectors** are renowned in the food retail industry for their leading 1PPM minimum detection level and accuracy. Identifying refrigerant leaks as early as possible in grocery stores and supermarkets enables the lowest refrigerant emissions, protection of refrigerant investments as well as inventory, employees, and customers.

Our enterprise-scale **Refrigerant Tracking & Compliance software** guides and steers users through all events and record keeping required for compliance with EPA608. You can be confident you

are complying with all the details of your relevant regulations across your enterprise while focusing on actions and managing your assets.

We recognize that not everyone has the team or resources to implement an effective refrigerant management strategy. Our tiered **Professional Services** can support and guide you, your team and your contractors so all is being done to comply with legislation while internal teams can be dedicated to your strategic projects and initiatives.

## Industry Participation and Leadership



The information contained in this document is intended solely to provide general guidance and support on matters of interest for the personal use of the reader, who accepts full responsibility for its use. The application and impact of laws can vary widely based on the specific facts involved. Given the changing nature of laws, rules and regulations there may be delays, omissions or inaccuracies in information contained on this article. Accordingly, the information on this article is provided with the understanding that the author(s) and publisher(s) are not herein engaged in rendering professional advice or services. As such, it should not be used as a substitute for consultation with a competent adviser. Before making any decision or taking any action, the reader should always consult a professional adviser relating to the relevant article posting.