



## Kroger Refrigerant Management Policy

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Kroger is committed to reducing greenhouse gas (GHG) emissions in our operations. Additionally, Kroger has signed on to the US EPA's GreenChill Program, which further signals our commitment to reducing refrigerant emissions from our facilities. And we recognize that regulations in 40 CFR Part 82, which codify Section 608 of the Clean Air Act, prohibit the venting of refrigerant gas into the atmosphere.

This Refrigerant Management Policy outlines the procedures and documentation required for all refrigerant gas handling in Kroger's retail stores, to help ensure we are meeting our commitments and relevant regulatory requirements.

Kroger Co. has a zero tolerance leak rate policy, which requires all leaks to be repaired prior to adding refrigerant, regardless of the size of the refrigerant system and the calculated leak rate.

This zero tolerance policy applies to all Kroger-employed and vendor-contracted technicians performing:

- Maintenance services for existing Kroger-owned appliances; and
- Installation and/or removal of Kroger-owned appliances as part of capital improvement projects.

All Kroger-employed and vendor-contracted refrigerant technicians must acknowledge and sign this policy.

### Record Keeping

The Kroger Co. uses a maintenance software system to maintain records for refrigerant management. This web-based application maintains refrigerant data for all appliances in Kroger's retail stores, including refrigerant full charge determination for each appliance, refrigerant leak rates, and appliance installation and removal information. Full charge determination shall be documented on the appliance registration. Definitions of the acceptable determinations are provided in the **Refrigerant Charge Determination** section of this policy.

1. Individual records must be maintained for all appliances, and must be updated each time any of the following occur:
  - a. Refrigerant is added to an appliance.
  - b. Refrigerant is removed from an appliance.
  - c. An appliance changes location.
  - d. A system is changed in a way that may alter the categorization of the appliance, thus changing the leak calculation rates.
  - e. A new appliance is added.
  - f. An appliance is retired.
  - g. An appliance is mothballed (refrigerant removed but appliance not disposed).
  - h. Refrigerant is accidentally released.
  - i. Reclaimed refrigerant is handled.
  - j. An appliance is sold or donated.

2. Copies of all technician certifications shall be maintained in the database, per 40 CFR Part 82 requirements.
3. Companies contracted to provide maintenance and project-related services must provide copies of all technician certifications to the division Maintenance Manager prior to performing any service regulated by 40 CFR Part 82. These copies will also be maintained with contractor contact information, including the technician's name. When a contractor is completing a repair involving a leak, the technician's name must be documented in the service call notes field in the Kroger maintenance software system.
4. All documentation necessary to meet 40 CFR Part 82 requirements must be available at the division office location for a period of 3 years from the date of service. Documents will be archived after 3 years.

### Equipment Labeling

1. All refrigeration systems/appliances shall have a bar-coded label located at or adjacent to each appliance's nomenclature tag. This label ID is to be used for any documentation associated with the appliance.



2. The label is to be located at the condenser or compressor section nomenclature plate.
3. Each appliance shall have the refrigerant type clearly labeled in this same area.
4. Retired or disposed appliances must have a Kroger Refrigerant Recovery label filled out and attached. A carbon copy of this tag shall be sent to the R&S Warehouse or the Division Maintenance Office for record keeping. In addition to the equipment tag, an appliance disposal form must be filled out and uploaded to Site Folio. If the appliance is part of a construction project, the form must be uploaded to that project. If the appliance is not associated with a construction project, the form must be uploaded to the Temp Mon project in Site Folio. Samples of both documents are included in this policy. *Text Documents/Fixturing & Store Equipment/Refrigeration Equipment/Refrigerant Management.*

### Kroger / Contractor Technician Maintenance and Service

1. The Kroger Co. has a **zero tolerance leak rate policy**, which requires all leaks to be repaired prior to adding refrigerant, regardless of the size of the refrigerant system and the calculated leak rate.

2. Maintenance services must be performed by service technicians that have been certified to the requirements of 40 CFR Part 82. Technicians following this regulation must use Kroger's automated maintenance program to comply with the documentation section of this policy.
3. Upon discovery of a leak the technician must begin leak checking the system. If needed, the technician shall contact the supervisor and additional resources will be allocated to assist in the leak check/repair.
4. No system will have refrigerant added unless it has been fully leak checked and all leaks repaired. This includes systems that may not apply under EPA guidelines.
5. Following this policy may require removal of product during the leak check activity. If that is the case, proper communication is key between technician, supervisor, and the store management and, if necessary, Facility Engineering management.
6. Contracted maintenance and service, when used, shall require the contracted technician to submit a fully completed Kroger refrigerant management tracking form in Kroger's Computerized Maintenance Management System (CMMS) or to contact the dispatch in Facility Engineering the same day the service is performed. The actual name of the technician shall be documented in the notes field of the service call. This documentation will be necessary before payment is authorized to the purchase order.
7. Once repaired, the proper documentation must be carried out in Kroger's CMMS, including proper follow-up leak checks. This documentation must be as detailed as possible and must be complete. All applicable fields on the software sections addressing leaks must be accurate and detailed.
8. Follow-up leak rate calculations will automatically be performed by the maintenance system. A follow-up service call will be automatically created when the leak call action is complete. This follow up verification must be completed within 10 days of the original leak date.
9. Preventative leak inspection requirements.
  - Locations with Automatic Leak Detection Systems (ALDS). ALDS locations will schedule an annual preventive maintenance (PM) on the ALDS to maintain operational accuracy. This PM shall be scheduled and documented in Kroger's CMMS.
  - Locations without ALDS. These locations shall schedule a quarterly leak inspection to be completed on all appliances in that location. These inspections shall be scheduled and documented in Kroger's CMMS.

### **Kroger/ Contractor Capital Improvement Projects**

1. Capital improvement work performed in Kroger locations shall have a binder labeled as "EPA Refrigerant Logbook" posted on the mechanical room door or other conspicuous location in the store for the duration of the project.
2. The binder is to be provided by the project manager and is to be posted and maintained by the contractor responsible for the refrigerant record keeping.
3. The binder shall have:
  - a. A copy of this policy;

- b. Contractor Refrigerant Management Tracking Forms;
  - c. Refrigerant Recovery labels;
  - d. Contractor supplied copies of technician certifications not yet on file with Kroger;
  - e. Instructions, including Kroger contact information, for contractors to use during the project to ensure compliance with the refrigerant management policy.
4. The forms in the binder shall be updated daily by the installing contractor and be available for review by the project manager, Kroger technician or other authorized individuals. The input forms from the binder shall be uploaded to Site Folio on a regular basis. Upload to: *Text Documents/Fixturing & Store Equipment/Refrigeration Equipment/Refrigerant Management*.
  5. Records for refrigerant ordered for systems during an improvement project must be maintained as part of the site records for refrigerant purchases. Refrigerant ordered through any Kroger purchasing system must have copies of the purchase order placed in the binder with prices hidden by the project manager.
  6. Refrigerant purchased for systems during an improvement project shall have each refrigerant tank tagged with a specific tank ID number. The tank ID number shall be documented as the purchase order number followed by sequential numbering, i.e. 1147985-1, 1147985-2, etc. These tank ID numbers shall be used to track the movement of refrigerant from each tank into each tagged refrigerated system.

Prior to each system startup, an authorized Kroger technician or project manager shall verify that the system has been installed, pressure tested and evacuated in accordance with the Kroger Refrigeration Installation Specifications and documented in the Piping Test Check Sheet. The authorized Kroger representative shall verify the full system charge documented on the refrigerant management tracking forms.

7. Refrigeration systems shall be charged with minimal amounts of refrigerant to allow all heat reclaim and refrigeration circuits to operate normally. Refrigerant added beyond this minimal charge are considered unnecessary excess which can lead to greater-than-necessary refrigerant loss.
8. At system startup, the total quantities of refrigerant transferred from each tank shall be documented before the end of each working day. This information shall be documented in the refrigerant management tracking form and posted in the binder. When the refrigeration system has been fully charged to the receiver level, which allows all heat reclaim and refrigeration circuits to operate normally, no additional refrigerant is to be added from the refrigerant tanks tagged with tank ID numbers.
9. In the event that refrigerant leaks are discovered after the initial pressure test, these refrigerant leaks shall be repaired, and the refrigerant required to fully charge the system to the receiver level to allow all heat reclaim and refrigeration circuits to operate shall be the responsibility of the refrigeration installer.
10. Kroger authorized technicians shall enter the data documented on the refrigerant management tracking forms into Kroger's CMMS and will sign off that the project has been completed. At this time the Kroger technician will enter a service call for a 10-day follow-up check on the new system by a service technician.

11. At the conclusion of the project, all forms must be signed off by a Kroger Maintenance Manager and approved by the project manager before payment of the final retainage is made. The logbook must then be turned in to the Maintenance Manager.

### **Refrigerant Charge Determination**

1. To perform leak rate calculations, the refrigeration equipment must be labeled with the refrigerant type and amount of the full charge. The refrigerant full charge determination can be summarized into four categories:

Manufacturers Determination: Self-contained equipment (e.g., retail end displays, soda machines, package HVAC equipment) that have a factory nomenclature tag affixed to the equipment.

Component Volumetric Calculation: This method measures the interior dimension (ID) of all components and the conditions of the refrigerant in each. The full charge amount of refrigerant is mathematically calculated.

Refrigerant Added or Evacuated:

- I. New system: When a new system is installed, the amount of refrigerant installed is the full charge amount.
- II. Existing System: An existing system with an existing full charge determination may have revisions done that change the amount of the full charge.

Mid-point of Established Range: Established range based on the best available data regarding the normal operation characteristics and conditions for the appliance, such as 80% of receiver holding capacity.

### **Appliance Disposal**

1. Appliances that are disposed of must include all forms that are applicable to the appliance leaving the ownership of Kroger under the following circumstances:
  - Transferring an appliance to a new owner;
  - Transferring an appliance to a recycler; or
  - An appliance being disposed of to a waste hauler.
2. A refrigerant management documentation form must be filled out and submitted to the project manager or Kroger Maintenance Manager for each appliance being disposed of. A copy of this form shall be placed in the project binder and uploaded to Site Folio.
3. Refrigerant must be recovered by a certified technician prior to disposal of appliances. A refrigerant recovery label must be completed and attached to the appliance.
4. An operable self-contained appliance being resold may include the refrigerant charge at the time of transfer if the intent of the purchaser is not to scrap the appliance. The appliance must be tagged indicating that the appliance contains refrigerant.
5. An appliance that is sold or disposed of will need the contact information of the purchasing person documented on the refrigerant management disposal form. Below is an image of the refrigerant recovery label to be filled out in full and placed on the appliance by the data plate. The project manager or Kroger Maintenance Manager shall ensure that an image of the label is taken and electronically filed for future reference and the disposal form is filled out and uploaded to Site Folio.

**Additional Information**

**Appliance Disposal Label:**

ORDER INFO:  
 Paperworks, Inc/Staples  
**#2301001**  
 Tape Logic Rectangle  
 Laser Labels 3 1/2"x5" Fluorescent  
 Yellow 400/case

REFRIGERANT RECOVERY	ACTION TAKEN
Date: _____/_____/_____	Scrap _____ To R&S _____ Sell _____
From Location _____	Sold with Refrig. Yes _____ No _____
Refrigerant Type _____	Sold with Refrig. Type _____
Refrig. Recovered _____ LBS _____ OZ	Sold with Refrig. _____ LBS _____ OZ
Equip. Model # _____	Sold to Name _____
Equip. Serial # _____	Buyer Contact Info _____
Equip. KR # _____	Technician Name _____
***UPDATE EQUIPMENT REGISTRATION & LOCATION IN SERVICE HUB***	

**Appliance Disposal Form:**

Site|Folio Link

Refrigerant Recovery/Equipment Disposal and Sale	
Date	
Filename	
From location	
Refrigerant	
Amount of refrigerant recovered	
Lbs.	
Ozs.	
Technician Certification #	
Recovery Machine Used	
Model	
Serial	
Equipment Description	
Model	
Serial	
Was a refrigeration component	
Equipment ID	
Scrap	
To R&S	
Sold with refrigerant content	
Status of equipment	
Sold to:	
Name:	
Address:	
Phone number:	
<small>A copy of this information is to remain with the equipment while in transit and while mot/baled. When equipment is sold or scrapped this information is to be filed in the Facility Engineering Maintenance Office.</small>	

**References**

40 CFR 82.150 through 82.169  
 Information on the CAA Section 608 requirements may be found at:  
[www.epa.gov/ozone/title6/608](http://www.epa.gov/ozone/title6/608)

**Revisions**

Revised 2.28.2012 – Changed reference to EPA 608 to 40 CFR Part 82  
 Revised 6/10/2016 – Added additional leak repair requirements in support of GreenChill program  
 Revised 2/1/2019 – Added/changed requirements due to EPA updates that take effect 1/1/2019  
 Revised 07/23/2021 – Refreshed text  
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