



# Instructions for Participating in NRI's Refrigerant Reclamation Program

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1. Obtain a Recovered Refrigerant tag/label and container(s) from either NRI or an authorized distributor.
2. Fill out a Recovered Refrigerant Tag for each recovery cylinder and a Recovered Refrigerant Label for each drum. Bill of Lading number must be written on each label/tag and the appropriate panel on the EZ ONE-SHOT™ disposable 30 lb. recovery cylinder.
3. Fill the containers according to NRI Filling Instructions.
4. All Material must meet NRI Recovered Refrigerant Acceptance Specifications. Please see Terms and Conditions for additional information.
5. Ship your properly filled and tagged containers to:  
**National Refrigerants, Inc.**  
**661 Kenyon Avenue**  
**Rosenhayn, NJ 08352**  
or an authorized NRI Distributor

<b>Purity</b>	98% minimum for all HCFCs & HFCs 99.5% for all CFCs
<b>Component Ratios/Composition</b>	must be within AHRI 700 Specifications for allowable composition (weight). Composition must be within ASHRAE classification for toxicity and flammability.
<b>Oil</b>	not to exceed 20% by weight in R-11, R-113 & R-123; not to exceed 10% by weight all others
<b>Water</b>	not to exceed saturation point of refrigerant
<b>Acid</b>	pH must be greater than 2.0 and less than 12.0
<b>Dyes</b>	not to exceed 1% by weight
<b>Hydrocarbons</b>	not to exceed 0.5% by weight

## Recovered Refrigerant Acceptance Specifications

1. Only nonflammable fluorocarbon refrigerants from refrigeration and air conditioning systems are accepted. Halons will not be accepted. Fluorocarbons from other applications, such as solvents or cleaning agents, are NOT acceptable.
2. Non-Fluorocarbon refrigerants, such as ammonia, methylene chloride, propane, ethane, sulfur dioxide, etc. are NOT acceptable. Also, fluorocarbon refrigerants contaminated with hydrocarbons in excess of 0.5% by weight (total hydrocarbons) will not be accepted.
3. Only one type of refrigerant per container is acceptable. Refrigerant must be shipped in DOT-approved recovery containers. Refer to AHRI Guideline K. R-11, R-113 and R-123 must be shipped in drums to avoid additional handling fees.
4. Containers must not exceed Maximum Allowable Gross Weight as specified in NRI's Cylinder Weight Chart. Overfilled containers will be subject to a handling fee.
5. Refrigerant Contaminants are acceptable with the following limits (**chart above**):

## Safety Recommendations

1. Only fill cylinders that are currently DOT approved for fluorocarbon refrigerants. Always inspect the cylinder for proper pressure rating and latest hydrostatic test date. Thoroughly check each cylinder and drum for dents, gouges, bulges, cuts or other imperfections, which may render it unsafe to hold refrigerant for storage or transportation.
2. It is highly recommended to read the Air Conditioning, Heating & Refrigeration Institute "Guideline K-Guideline for Containers for Recovered Fluorocarbon Refrigerants".
3. Be sure all connections are made tight before transferring refrigerant into containers. Be sure all closures are made tight on the container immediately after filling. Be sure to replace valve outlet caps on cylinders.
4. Always use a scale when filling any cylinder.  
DO NOT OVERFILL.
5. **Caution:** Liquid refrigerant can cause frostbite if skin contact occurs. Be aware that the refrigerant/oil being removed from a system may contain contaminants, which may be harmful to breathe. Avoid contact with skin. Always provide fresh air when working in enclosed areas. Avoid breathing vapors. Always wear safety glasses and gloves (cold resistant for pressurized refrigerants and rubber-type for R11, R113 or R123). Avoid contact with clothing.

## Filling Procedure for Recovered Refrigerant

1. Visually inspect the container to be filled. Use vacuum pump to pull cylinder into full vacuum. Strictly follow all DOT requirements for inspection of refrigerant containers. For all cylinders, leak test with a vacuum gauge. Do not fill a leaking cylinder. NRI is not responsible for refrigerant recovered into a leaking cylinder.
2. NRI does not recommend using a recovered refrigerant cylinder as a temporary storage container. NRI recommends the use of the EZ ONE-SHOT disposable recovery cylinder when the recovered refrigerant will be returned to a system without processing.
3. Place the container on a scale. Note empty weight of container to determine the maximum gross weight. Add the corresponding maximum refrigerant weight to the tare weight to get the maximum allowable gross shipping weight. (See Guidelines for Maximum Shipping Weight.)
4. Connect transfer hoses to the container. Make certain hoses are leak free. If possible, change hoses when recovering different types of refrigerant to avoid contamination by unintentionally mixing refrigerants.
5. Open container outlets and begin the transfer process following manufacturer's instructions for the recovery unit. DO NOT LEAVE THE CONTAINER UNATTENDED. Watch the scale closely. DO NOT OVERFILL. Do not exceed the gross weight limit. Do not fill more than 80% by volume. It is illegal to transport an overfilled cylinder.
6. When the scale reaches the gross weight limit-stop the transfer process. Tightly close all valves and other outlets. Disconnect the transfer hose. AVOID CONTACT WITH LIQUID REFRIGERANT/OIL MIXTURES. Immediately replace all valve outlet caps and other container closures.
7. Weigh the container. Always use a scale. DO NOT OVERFILL. Write the weight on all appropriate forms and on the container tag or label.
8. Completely fill out the container tag or label. Be sure the tag or label indicates the correct refrigerant in the container. It is illegal to transport a container without identifying the contents (including empty cylinders).
9. There will be a cylinder cleaning charge for cylinders returned less than 50% full. Check off the "For Cleaning Only" box on the hang tag. R11, R113 & R123 must be shipped in drums to avoid additional handling fees.
10. Ship your properly filled and tagged containers to an authorized NRI distributor.

## Terms and Conditions

1. All used refrigerants must meet "Recovered Refrigerant Acceptance Specifications". Only nonflammable refrigerants from refrigeration and A/C systems will be accepted. NRI will accept title to shipment only after it has been verified through analysis, in NRI's laboratory, that these standards have been met. Off specification material may, at NRI's option, be returned to the customer freight-collect or disposed of in a manner agreeable to both NRI and the customer at customer's sole expense.
2. Refrigerant must be shipped in DOT approved containers. Any shipments not meeting this specification will be refused. Containers must be properly skidded and banded for shipment. Drums must not have any rust, dents, bulges or leaks. Open-top drums are not acceptable. NRI will not be liable for any claims, damages, lawsuits, judgments or liabilities caused by or resulting from the fault or negligence of the shipper.
3. NRI reserves the right to charge cylinder refurbishing fees for any NRI owned cylinder that is returned damaged or defaced. A cleaning fee may be charged for each container that is returned with less than 50% of the maximum fill weight of recovered refrigerant. Handling fees may be charged for recovered refrigerant that requires special handling by NRI.

## Recovered Refrigerant Handling Fees

1. **Cylinder Handling Fee:** Customers returning recovery cylinders containing recovered refrigerant will be charged a handling fee according to the current price schedules.
2. **Free standing water:** Water exceeding saturation point of refrigerant; requires special processing to separate the water from the refrigerant; waste must be sent to waste water processing facility for purification.
3. **Excessive oil content:** Refrigerant oil (mineral or synthetic) that exceeds ARI Acceptance Specification (10% for high pressure; 30% for low pressure): fee will be charged for each pound of oil exceeding Acceptance Specifications.
4. **High acid content:** Acid present in the refrigerant at such a concentration that the pH level of the material is between 2.0 and 5.0 (a pH level below 2.0 would classify the material as hazardous waste according the 40CFR); such material must be handled as a priority in order to effectively neutralize the acid in the material
5. **Over-filled container:** Cylinders and drums exceeding the maximum Gross Weight as specified in NRI's Cylinder Weight Chart that require special handling; these containers must be handled as a priority as soon as they are received to prevent injury to NRI or other persons and to prevent the release of the material in the container to the atmosphere.

**Distributed By:**  
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