



RECOVERED REFRIGERANT MANAGEMENT PROGRAM

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Appendix A: Tags

Industry link:

<http://www.refrigerants.com>

Ontario Regulations:

<https://www.ontario.ca/LAWS/REGULATION/100463>



PRODUCT STEWARDSHIP

As a wholesaler to the HVAC/R industry, United Refrigeration of Canada Ltd.(URC) is in a key position to provide important information to the end users of products as produced by the manufacturers we represent. URC is a conduit for the exchange of information relevant to the wholesale trade, vendors and the customers we serve.

The proper recovery, handling, and transport of used refrigerants is required by law but also represents Best Practices to be utilized by technicians. URC is committed to ensuring that customers are current on the latest safety, compliance and refrigerant handling procedures.

URC is committed to only dealing with reputable manufacturers of refrigerants who are committed to environmental compliance and responsibility. URC's refrigerant product stewardship program is designed to allow customer's access to the best services available. This program includes but is not limited to:

- Multiple branch locations for ease of access.
- Access to approved refrigerant recovery cylinders.
- Acceptance of used refrigerant from HVAC/R industry sources (see Terms and Conditions) for reclamation or destruction.
- Used refrigerant analysis, refrigerant reclaim services and refrigerant destruction services.
- Transport Canada approved waybills with each purchase of regulated products (TDG).
- Receipt for recovered refrigerants returned (see Terms and Conditions).
- Assistance with regulatory and environmental compliance based on years of experience managing used refrigerant.
- Promotion of educational programs designed to keep customers informed and up to date on product offerings as well as regulatory changes affecting the HVAC/R industry.

This program has been provided as a guide to give a clear understanding of URC's Product Stewardship Program. This program will be reviewed annually or as required.

URC cannot assume any liability or responsibility for any use or misuse, whether intentional or unintentional, of any of the information or recommendations provided in this program.



RECOVERED REFRIGERANT RETURN PROCEDURES

1. Contractor picks up an empty recovery cylinder at a URC branch. The contractor is charged a deposit for each cylinder as well as a recovery cylinder handling charge. The serial #'s of the cylinders will be recorded for tracking purposes.
2. A valid Ontario ODP card is required when returning refrigerants to URC. Contractors should also note that training in the proper handling of refrigerants is required under the Transportation of Dangerous Goods act when transporting refrigerants.
3. The contractor fills the recovery cylinder with an approved refrigerant and returns it to a URC branch. Before accepting a recovery cylinder it should be inspected for damage and possible leaks.
 - a, If the cylinder is leaking and the leak cannot be stopped by tightening the valve the cylinder will not be accepted.
 - b, At that point the customer could choose to be invoiced for a new cylinder and transfer the refrigerant into the new cylinder. The customer can now return both cylinders for their deposit value.
 - c, Under no condition can the transfer be performed in our branch or warehouse.
 - d, Under no condition do we accept recovery cylinders that are from non-approved vendors or are customer owned.
4. The URC representative will weigh the recovery cylinder to determine the net weight of material in the cylinder. Overfilled cylinders will not be accepted. See the Cylinder Weight Chart for maximum fill weights. A Recovered Refrigerant Order Agreement receipt will be created indicating the quantity of recovery cylinders and estimated weight of recovered material returned. The value of the original deposit will be credited to the customer's account (proof of purchase may be required). URC reserves the right not to issue credit for the deposit if the recovery cylinder is returned damaged, defaced or leaking.
5. Each cylinder must be properly labeled for compliance with WHMIS and Transport Canada Transportation of Dangerous Goods. (See Appendix A: Tags)
6. All recovered refrigerant cylinders will be secured while transferring from the counter area to designated storage area.
7. Recovered refrigerant cylinders will be secured by banding, shrink wrap, or chains while being stored for shipment.
8. The recovered refrigerant storage area will be regularly inspected to ensure cylinders are secured and not leaking. The inspections will be documented by checking the box on the bottom of the weekly inventory reports.



CYLINDERS AND CHARGES

PART #		COST
CYDEP023N	23 kg Clean Tank Deposit	\$200.00
CYDEP058N	58 kg Clean Tank Deposit	\$280.00
CYDEP023CLEAN	Handling Charge	\$75.00
CYDEP058CLEAN	Handling Charge	\$125.00
DRUM DISPOSAL	Cylinder or Drum Scrap Charge	\$45.00

Please note the recovered refrigerant tags or labels must remain on the cylinders at all times to ensure compliance with all government regulations.



UNITED REFRIGERATION OF CANADA LTD

Revised January 2021

DISPOSAL

Disposal of mixed refrigerants will be subject to an \$18 per kilogram disposal charge.



TERMS AND CONDITIONS

1. All recovered refrigerants must meet “Recovered Refrigerant Acceptance Specifications.” URC will accept title to shipment only after it has been verified through analysis that these Acceptance Specifications have been met. Off specification material may, at URC’s option, be returned to the customer freight-collect or disposed of in a manner agreeable to both URC and the customer at the customer’s sole expense.
2. Refrigerant must be shipped in TC (DOT) approved containers. Any shipments not meeting this specification will be refused. Drums are not acceptable. URC 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. URC reserves the right not to issue the return deposit for any cylinder that is returned damaged, defaced or leaking.
4. All final weights, purity and contaminant levels will be determined by URC and our partner Fielding after receipt and analysis of each cylinder.
5. Additional fees may be charged for recovered refrigerant not meeting URC’s Recovered Refrigerant Acceptance Specifications.
6. Mixed refrigerants returned may be subject to a per kilo disposal charge.
7. URC will only accept Fielding Chemical Technologies (“Fielding”) TC (DOT) approved containers.
8. Credit for Fielding deposits will be issued with proof of purchase and all necessary labels and hangtags in place.
9. Recovery Cylinder Handling Fees will apply to all Fielding recovery cylinders acquired on deposit from URC.
10. Anyone returning refrigerants must be in possession of a valid ODP license.
11. Customer must have a URC credit account in good standing to participate.
12. All charges will be applied to the customer’s URC account after analysis.

Prices subject to change without notice.

** This is not a waste program **



FILLING PROCEDURE FOR RECOVERED REFRIGERANT

1. Visually inspect the container to be filled. Strictly follow all TC requirements for inspection of refrigerant containers. For all cylinders, leak test by a vacuum gauge. URC is not responsible for refrigerant recovered into a leaking cylinder.
2. Place the container on a scale. Note empty weight of container to determine Maximum Gross Weight.
3. Connect transfer hoses to the container. Make certain hoses are leak free. If at all possible, change hoses when recovering.
4. 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.
5. When the scale reaches the gross weight – stop the transfer process. Tightly close all valves and other outlets. Use a leak detector device to confirm that the recovery cylinder is not leaking from the valve, pressure release device or neck.
6. Disconnect the transfer hose. **AVOID CONTACT WITH LIQUID REFRIGERANT/ OIL MIXTURES.** Immediately replace all valve outlet caps and other container closures. Weigh the container. Write the weight on all appropriate forms and on the container tag or label.
7. Completely fill out the container tag or label. Be sure the tag or label indicates the correct refrigerant container. It is illegal to transport a container without correctly identifying the contents (including empty cylinders).
8. Ensure that the recovery cylinders have all the necessary labels for transport and WHMIS regulations.

***See following page for reference weights for filling containers.**



CYLINDER WEIGHT CHART

This is only for reference. Actual tare weight must be taken from each cylinder. Each cylinder is stamped with that cylinder’s service pressure. URC assumes no liability for the accuracy of the information contained herein. Please refer to AHRI Guideline K.

TO DETERMINE SHIPPING WEIGHT, ADD MAXIMUM REFRIGERANT WEIGHT AND CONTAINER TARE WEIGHT.

Cylinder Sizes (kg)		23	58	1/2 ton	1 ton
Cylinder water capacity (kg/lbs)		21.68/48	55.91/123	454/1000	727/1602
	Minimum Cylinder Service Pressure required (psig)	Maximum Refrigerant Weight (kg/lb)	Maximum Refrigerant Weight (kg/lb)	Maximum Refrigerant Weight (kg/lb)	Maximum Refrigerant Weight (kg/lb)
R22	260	20/45	53/117	432/953	691/1524
R134A	260	21/46	54/119	438/966	700/1545
R401A	260	20/45	53/117	432/952	691/1523
R401B	260	20/45	53/117	431/951	690/1522
R402A	350	20/44	51/113	416/917	665/1467
R402B	300	20/44	51/113	417/920	668/1472
R404A	300	18/40	47/103	379/835	606/1336
R407A	300	20/44	51/113	415/916	665/1466
R407C	300	19/43	51/112	413/910	660/1456
R407F	300	19/43	50/110	406/896	651/1435
R408A	300	18/40	47/104	385/848	615/1356
R409A	260	21/46	53/119	440/971	705/1554
R410A	400	18/40	47/104	384/847	615/1355
R422B	260	20/44	51/113	418/922	670/1476
R448A	300	19/42	48/107	396/874	635/1400
R449A	300	19/42	49/109	404/891	647/1427
R452A	300	20/44	51/113	417/919	668/1472
R507	300	18/40	47/103	380/838	608/1341
R513A	260	20/45	53/116	430/949	689/1520
Low Pressure Containers	Drum Size (kg)	Avg. Drum Tare Weight (kg/lb)	Maximum Allowable Refrigerant Weight (kg/lb)	Maximum Gross Shipping Weight (kg/lb)	
R123	45.45	4.55/10	40/90	45/100	
	90.91	9.09/20	81/180	90/200	
	295.45	29.55/65	265/586	295/650	

CYLINDER SHIPPING WEIGHT = Tare Weight + Refrigerant Weight

Please note that R123 refrigerant is handled differently. Please call your local branch prior to attempting a return for this refrigerant.



RECOVERED REFRIGERANT ACCEPTANCE SPECIFICATIONS

1. Only nonflammable fluorocarbon refrigerants from refrigeration and air conditioning systems are acceptable. Halons will not be accepted. Fluorocarbons from other applications such as solvents or electrical transformers are NOT acceptable.
2. Non-fluorocarbons refrigerants, such as ammonia, propane, ethane, sulfur dioxide, lithium bromide, 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 TC (DOT)-approved recovery containers.
4. Containers must not exceed Maximum Allowable Gross weight as specified in URC's Cylinder Weight Chart. Customers must comply with TC regulations regarding the filling and shipping of containers.
5. Refrigerant contaminants are acceptable with the following limits:

Purity:	99.5% minimum
Component Ratios:	Must be within AHRI 700 Specifications for allowable composition (weight %). Composition must be within ASHRAE classification for toxicity and flammability.
Oil:	Not to exceed 20% by weight in R123; 10% for all other refrigerants.
Water:	Water must not exceed saturation point of refrigerant.
Acid:	pH must be greater than 2.0 and less than 12.0.
Dyes:	Not to exceed 1% by weight.
Hydrocarbons:	Not to exceed 0.5% by weight.

ANY AND ALL RISK OF LOSS ASSOCIATED WITH THE REFRIGERANTS AND MATERIALS TENDERED BY CUSTOMER REMAINS WITH THE CUSTOMER UNTIL SUCH REFRIGERANTS AND MATERIALS ARE TESTED, VERIFIED AND ACCEPTED AS PROVIDED HEREIN.



UNITED REFRIGERATION OF CANADA LTD

Revised January 2021

TERMS AND CONDITIONS SUBJECT TO CHANGE WITHOUT NOTICE.

APPENDIX A: TAGS

RECOVERY CYLINDER



UN1078
REFRIGERANT GAS, N.O.S.

Main Component : _____ (chlorodifluoromethane) _____

1. Cylinder shipped from Fielding in vacuum may contain residue contaminants. Do not use recovered gas. It may cause damage to equipment.
2. This is a refillable cylinder. When empty, close valve tightly – do not vent residual pressure to atmosphere.
3. Return this cylinder, with valve intact, to your point of purchase for a deposit refund. Do not dispose of cylinder in a dump or land filling site.

Refrigerant Recovery Program

1. Do not overfill this cylinder.
2. Do not expose to temperature above 50C.
3. Only qualified technicians should recover refrigerant.
4. Do not fill with flammables, corrosives or toxics.
5. Do not mix refrigerant types.
6. This cylinder belongs to Fielding Chemical Technologies Inc.

AVERTISSEMENT: CONTIENT DU GAZ SOUS PRESSION, PEUT EXPLOSER SI CHAUFFE. Évitez de respirer les vapeurs. L'inhalation ou la mauvaise utilisation du produit peut entraîner des blessures personnelles ou la mort. Peut se décomposer au contact avec des surfaces métalliques chaudes pour libérer des produits de décomposition corrosifs et toxiques. Le contact avec un liquide peut provoquer une gelure. Peut provoquer une irritation cutanée et oculaire.

PRECAUTIONS: Utilisez avec une ventilation adéquate. Évitez tout contact avec les yeux, la peau et les vêtements. Entendez dans un endroit frais et sec. Évitez toute chaleur excessive lors de l'entreposage. Évitez de laisser tomber le contenant. Ne percez pas le contenant. Portez un équipement protecteur lors de la manipulation.

Référez-vous aux fiches signalétiques.

ENTREPOSAGE: PROTÉGEZ DES RAYONS SOLAIRES; ENTREPOSEZ DANS UN ENDROIT BIEN VENTILÉ

PREMIERS SOINS: Si inhalé, transportez la victime à l'air frais. Si sa respiration est difficile, administrez de l'oxygène. Si la victime ne respire plus, commencez la respiration artificielle. Appelez un médecin. N'administrez pas de pépérine ou d'adrénaline. En cas de contact oculaire, rincez à l'eau courante pendant au moins 15 minutes. En cas de contact cutané, enlevez les vêtements contaminés et rincez la zone touchée avec de l'eau tiède (non chaude). Recherchez de l'aide médicale immédiatement.

BOUTEILLE RECHARGEABLE: DOIT ÊTRE RETOURNÉE AU POINT D'ACHAT POUR LE REMBOURSEMENT DU DÉPÔT. LE CONTENANT NE DOIT PAS ÊTRE ENVOYÉ À LA DÉCHARGE.

WHMIS 407C

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