

## R410A REFRIGERANT CONVERSION INSTRUCTIONS USING NU-CALGON Rx11-FLUSH TO PURGE AIR CONDITIONING LINE SETS

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*Nu-Calgon Rx11-Flush Canisters*



*Air Conditioning Line Set*



*Flush Accessories*

### **The Problem - Contaminated Refrigerant**

Occasionally, refrigeration and air conditioning systems suffer failures, such as compressor burnout, which can result in contamination of the refrigerant liquid and system with unwanted particulate, sludge, acids, carbon residues or moisture. Following repair, the entire refrigeration system needs to be purged of these contaminants before it is put back into operation.

### **Traditional R11 Flushing Caused Environmental Issues**

**R11**, a ChloroFluoroCarbon (CFC) based solvent, was previously used to efficiently and effectively flush such contaminated air conditioning and refrigeration systems. However, we now understand that any CFC's can contribute towards depletion of the Earth's atmospheric Ozone Layer, and so R11 has been gradually phased out of production and usage.

### **The Benefits Of Nu-Calgon Rx11-Flush**

**Nu-Calgon Rx11-Flush** was specifically developed to offer the benefits of R11 without the environmental concerns. This product uses state-of-the-art HydroFluoroCarbon (HFC) technology, and is even more effective than R11. It dries quickly, has a low boiling point, will not attack refrigeration system components, and it provides for greater worker safety without attacking the Ozone Layer.

Furthermore, with the new *13 SEER (Seasonal Energy Efficiency Ratio)*-rated refrigeration and air conditioning equipment, and the continued retrofit to R-410A based equipment, the Nu-Calgon RX11-Flush is perfect for purging line sets to prepare for the conversion.

***Nu-Calgon Rx11-Flush Is Now The Prescribed Industry Standard  
For Flushing Refrigeration And Air Conditioning Systems***

**Nu-Calgon Rx11-Flush** is very effective in system clean-up after compressor burnouts, perfect for flushing line sets in advance of conversion to R410A, and is approved as part of the Environmental Protection Agency's *Significant New Alternatives Program (SNAP)*.

### General Guidelines For Using Nu-Calgon Rx11-Flush

- Use only appropriate refrigerant, proper recovery equipment, components, tools and lubricants as established in the industry.
- Do not inject Rx11-Flush solvent into the compressor itself, only the supporting refrigeration system should be flushed.
- Large systems or systems with unusual configurations that could trap the solvent should be disassembled and flushed individually by section.
- The exact amount of Rx11-Flush required will vary by the internal design of the system, the nature of the failure, the degree of contamination trapped in the system and the temperatures at which the failure occurred.
- If the system to be flushed includes larger components such as a receiver, Nu-Calgon recommends visual inspection. If these components appear to be contaminated, and are small enough to be flushed with Rx11-Flush, this may be done. If they are too large to economically flush with Rx11-Flush, use a traditional degreasing solvent such as *Degreasing Solvent ef*.
- Never connect the Rx11-Flush canister to Nitrogen via manifold sets or other charging hoses. Failure to ensure the system is free of pressure when injecting Rx11-Flush may cause the canister to burst.

### Nu-Calgon Rx11-Flush Capacity Guidelines

System Size	Required Rx11-Flush Canister Size
3-4 Tons	<a href="#">Nu-Calgon Rx11-Flush 1 lb Canister (4300-09)</a>
5-7 Tons	<a href="#">Nu-Calgon Rx11-Flush 2 lb Canister (4300-11)</a>
8-50 Tons	<a href="#">Nu-Calgon Rx11-Flush 13 lb Canister (4300-15)</a>

### Equipment Required For Rx11-Flush System Flushing Operations

1. [Nu-Calgon Rx11-Flush Injection Tool Part # 4300-99](#), and a standard refrigerant charging hose to inject the solvent into the system. These tools should be dedicated to this flushing procedure only.
2. A small, *re-sealable waste container* that will hold the used Rx11-Flush solvent after it is flushed through the system. Exiting solvent must be visible so that it can be inspected during the flush to determine when the solvent begins to run clean - indicating the system is purged.
3. A *tank of clean, compressed Nitrogen* regulated to 120 psi. The tank must have a dispensing hose and will be used to purge the solvent from the system.
4. A *vacuum pump* with the appropriate hoses and clamps.
5. *Personal Protective Equipment* should include face protection and protective rubber gloves.
6. *Adequate Ventilation is highly emphasized.*

## Recommended Nu-Calgon Rx11-Flush Accessories

### Nu-Calgon Part #s

- [Nu-Calgon Flushing Tool: 4300-50](#)
- [Nu-Calgon Rx11-Flush Gun: 4300-51](#)
- [Nu-Calgon Rx11-Flush Hose 24": 4300-52](#)
- [Nu-Calgon Rx11-Flush Injection Valve: 4300-99](#)

**The Nu-Calgon Rx11-Flush Gun** is a trigger mechanism that attaches to a standard charging hose when applying Rx11-Flush. Control at the application makes flushing easy and more practical for the technician, and the rubber flush tip makes it versatile in flushing different sizes of lines.

#### *Nu-Calgon Rx11-Flush Gun:*

- Connects to charging hose
- Makes flushing easy
- Equipped with rubber flush tool

**The Nu-Calgon Rx11-Flush Hose** is a 24" service hose that is perfect for applying Rx11-Flush, particularly in flushing line sets.

#### *Rx11-Flush Hose*

- 24" Service hose
- Ideal for line set flushing

## Instructions for Using Nu-Calgon Rx11-Flush

1. Determine the exit point at either end of the line set.
2. Crimp or restrict the exit point to increase the mass flow and the contact time of the Rx11 Flush through the line.
3. Place a small container at the exit point of the tubing to catch the used Rx11-Flush solvent.
4. *General Guidelines* (oil load and line configuration can affect the quantity of Rx11-Flush required):
  - Up to ½" tubing use a 20-30 second burst of Rx11-Flush through each line for every 50ft of run.
  - Up to 7/8" tubing use a 60-90 second burst of Rx11-Flush through each line for every 50ft of run.
5. Follow the Rx11-Flush with compressed Nitrogen to increase mass flow for maximum cleaning power. The Nitrogen pushes the Rx11-Flush along with the emulsified oils through the line.
6. To remove any residual Rx11-Flush - pull a vacuum on the line set to boil it off.

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