

## REVITALIZES AND ENERGIZES AIR CONDITIONING SYSTEMS. USE WITH ALL REFRIGERANTS.

- Quiets noisy compressors
- Reduces energy consumption, lowers starting and running amps
- OEM approved, frees sticking thermostatic expansion valves and reversing valves.
- Aids in oil return with existing oil in R-22 retrofits
- Great for new and old systems
- Use A/C Re-New with a reusable injector or the quick one-time use Connect Inject version!
- Single dosage treats up to 5 tons

### Description

A/C Re-New has been successfully used for many years to improve the performance of air conditioning systems. A/C Re-New provides significant savings in energy use, quiets noisy systems, extends the life of systems, and resolves sticking reversing valves and TEVs due to friction. It is a lubricant that blends with the system's oil, lasting for the life of the equipment, or until the oil is changed. In recent years, A/C Re-New has been successfully used to aid in existing oil migration when retrofitting an R-22 air conditioning system with a near drop-in refrigerant; examples include R-427A and R-407C and others. A/C Re-New not only helps with oil return at retrofit, but also comprehensively renews the air conditioner by reducing friction in the compressor (lowers amp draw), quiets the system and can aid in sticking flow control valves because of friction due to years of service.

### Application

A/C Re-New is for air conditioner and heat pump systems. It is formulated for use with R-22, R-410A as well as other air conditioning applicable refrigerants. The 4 oz. package can be used to treat systems up to 5 tons. For large commercial systems, such as packaged units, multiple bottles should be used. Additionally, the product is available in 32 oz. quarts. Install with the A/C Re-New Injector, part no. 4057-99.

A/C Re-New Connect Inject is a quick, one-time disposable injector option for introducing A/C Re-New into the air conditioning system where the vessel is pre-charged with 4 fluid ounces of treatment. Although not required, the use of the reusable Connect Injector Tool (part no. 4155-01) is recommended. One device up to 5 ton system capacity, use multiple injectors for larger systems.

## Refrigeration Oil

### A/C Re~New



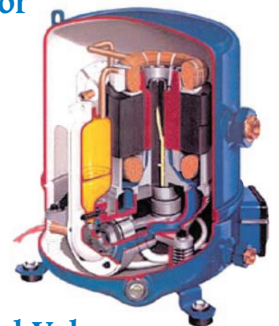
The Connect Inject version, sold at a slight premium to the traditional approach, provides the benefit of being a quick billable option of not requiring the purchase and ongoing management of the traditional A/C Re-New Injector Tool for all service trucks in the organization.

### Packaging

1 quart (32 fl. oz.)	<b>4057-54</b>
4 fluid ounce can	<b>4057-55</b>
A/C Re-New Injector Tool	<b>4057-99</b>
A/C Re-New Connect Inject	<b>4057-56</b>
Connect Inject Tool	<b>4155-01</b>

### A/C Re-New in the Compressor

- ✓ Improved lubricity through reduced friction drag
- ✓ Cleaner system
- ✓ Quieter operation



### A/C Re-New with Flow Control Valves

- ✓ Resolves sticking reversing valve and TEVs due to friction

### A/C Re-New with R-22 A/C Retrofits

- ✓ Aids oil migration with existing oil when retrofitting R-22 to alternate refrigerants like R-427A, R-407C and others.

## A/C Re-New Technology Test Results

Residential air conditioning systems account for up to 70% of the home's energy consumption. And when the outdoor temperature rises, the system works longer and harder. Through tests on actual installations\*, the A/C Re-New technology has demonstrated its ability to reduce the air conditioning systems energy use on average by 11%. It has also been found to improve the system's cooling performance and quiet noisy systems.

### Energy Savings

Number of units tested	Outdoor Temperature	Average Running amps Before A/C Re-New	Average Running amps After A/C Re-New	% Savings
26	73.3°F	15.8	14.1	10.8%
12	56.4°F	17.4	16.5	5.2%

\* Data available upon request.

### Noise Reduction

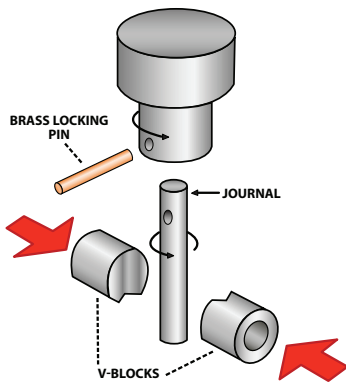
Average Decibel Before A/C Re-New	Average Decibel After A/C Re-New	Decibel Drop
77.08	75.12	1.96

### Cooling Performance

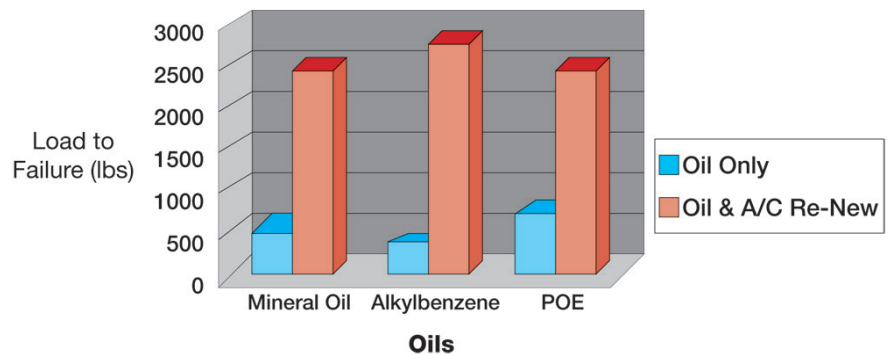
Average Air Duct Temp. Before A/C Re-New	Average Air Duct Temp. After A/C Re-New	Temperature Drop
57.4°F	54.2°F	3.2°F

### Falex Pin Test

This test is used to evaluate wear and tear, friction and extreme pressure properties of materials and lubricants. A rotating pin, also referred to as a journal, is lubricated with the test product and is compressed between two V-shaped blocks. Pressure (depicted by the red arrows) is added at increasing levels until the pin fails. The goal is to determine how much load or force the lubricant can withstand before it fails. Therefore, the higher the load, the better the lubricant. Three typical industry oils (Mineral Oil, Alkylbenzene and POE) were tested, both alone and then mixed appropriately with the product. A/C Re-New significantly improved the oil's load-to-failure points.



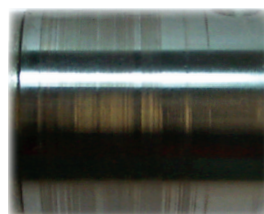
Falex Pin & V-Block Testing Results



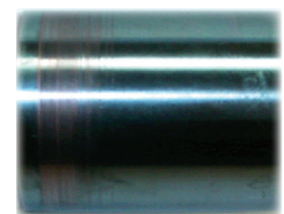
### Compressor Wear Test

This test evaluated how well A/C Re-New reduced metal wear in operating compressors. Six reciprocating compressors were tested with R-22 refrigerant and mineral oil for a period of 500 hours. A/C Re-New was applied to half of the compressors. As shown in the pictures to the right, the bearing wear on the compressors was significantly reduced in those compressors containing A/C Re-New. Less wear means the equipment will last longer and reduced friction results in lower energy consumption. Similar results were achieved in scroll compressors (photos available).

Reciprocating - Upper Journal



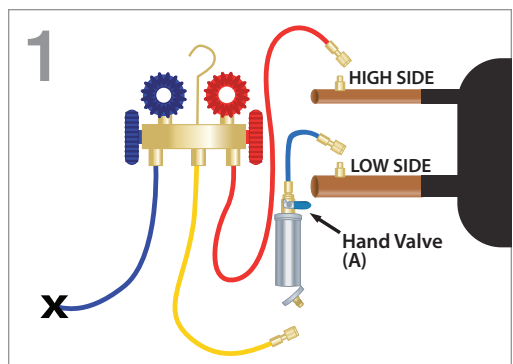
Without A/C Re-New



With A/C Re-New  
Fewer Scars

# Directions for Liquid Bottles (4057-55, 4057-54)

Four fl. oz. Dosage Treats up to 5 Tons

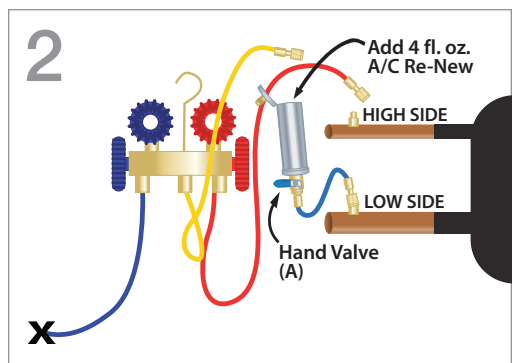


## STEP 1:

- Make sure system is running and low side and high side service ports are properly identified. If unit is a heat pump, be sure it is in cooling mode. Hand-valve (A) must be closed.
- Unscrew the aluminum injector cap with 1/4" male inlet fitting.
- Connect the 1/4" SAE fitting of blue hose to suction service port of system.
- Crack open hand valve (A) on injector to chase the remaining air out of the blue hose, then close hand valve (A).

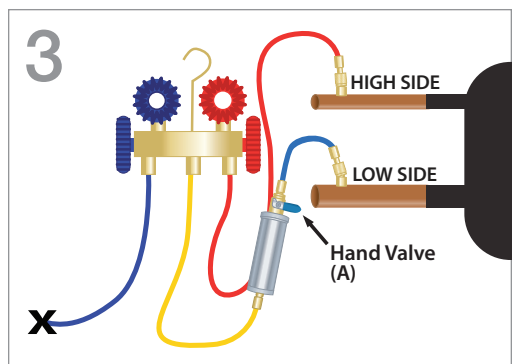


Use with A/C Re~New  
Injector Tool, P/N 4057-99



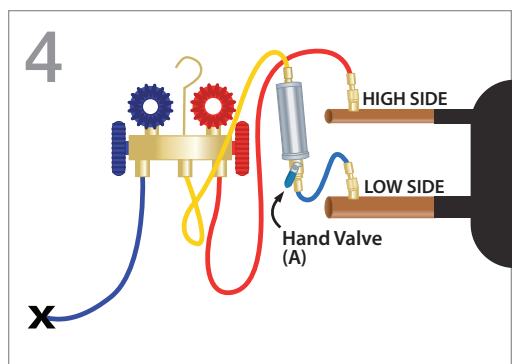
## STEP 2:

- Pour in 4 fl. oz. of Nu-Calgon A/C Re-New.
- Recap the A/C Injector with the aluminum cap with 1/4" male inlet fitting. Make sure the cap is hand tight to ensure a good seal is made at the cap.



## STEP 3:

- Make sure both valves on gauge set are closed. Connect high side (red) line of manifold gauge set to the high side service port.
- Barely thread the middle manifold hose (yellow) to the 1/4" male inlet fitting of the A/C Re-New Injector Tool (side opposite of the valve/blue hose). Do not thread to the point of depressing the Schrader core.
- Briefly crack open high side manifold valve to purge air out of the yellow hose, then quickly tighten yellow hose fitting at the injector, and close high side manifold valve.



## STEP 4:

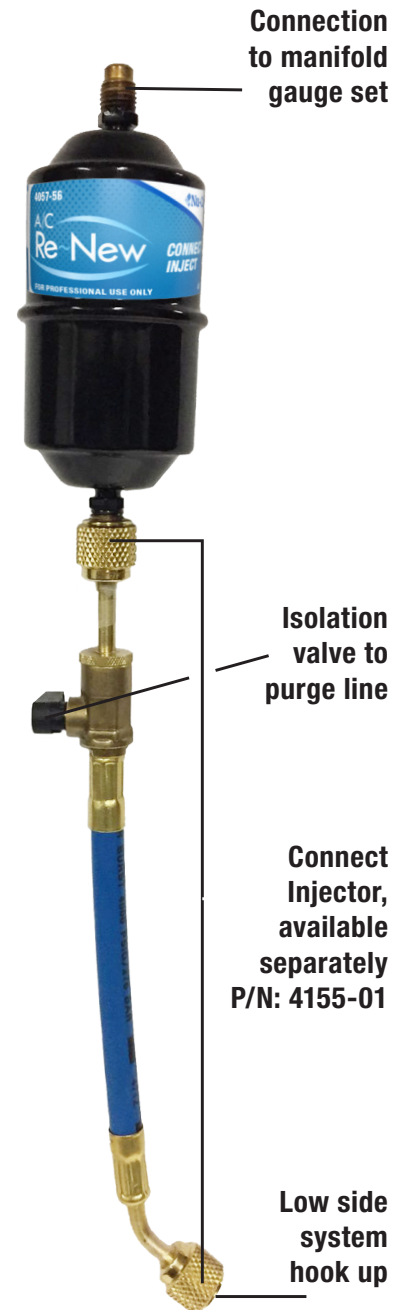
- Open injector hand valve (A) so A/C Re-New will be allowed to flow from injector into the low side of the system.
- Briefly open high side valve of the manifold gauge set to allow a little high side liquid to flow through the yellow hose/injector. Close high side manifold valve. Repeat process as necessary for a one minute duration for A/C Re-New to be fully injected into the low side of the system.
- Close high side valve of the manifold gauge set and wait an additional one minute for the injector assembly to equalize to suction pressure.
- Fully close hand valve (A) on A/C Re-New Injector and remove blue hose from suction service port.
- Once disconnected from system, slowly open hand valve (A) on injector so it equalizes the assembly to atmospheric pressure - ensure outlet fitting is pointed toward the ground. Close hand valve (A).
- Ensure injector remains capped to prevent contamination on its next use.

**Note:** Use two canisters (4057-55) or eight fluid ounces for A/C systems between 5-10 tons. For larger A/C systems, approximately 15% of the oil charge needs to be A/C Re-New. Remove equal amount of existing oil first.

## Directions for A/C Re~New Connect Inject (4057-56)

*One Injector Treats up to 5 Tons*

1. Make sure system is running and low side and high side service ports are properly identified. If unit is a heat pump, be sure it is in cooling mode. Remove caps from the Connect Inject.
2. Make sure isolation valve on Connect Injector (4155-01) is turned off and connect to low side service port. Barely screw on Injector, briefly open valve to purge hose and then tighten.
3. Connect high side (red) line of manifold gauge set to the high side service port. Briefly crack open high side manifold valve to purge air out of the yellow hose. Close high side manifold valve, then quickly tighten yellow hose fitting to the A/C Re-New Connect Inject.
4. Open isolation valve on Connect Injector. Over the next minute, with the vessel in a vertical position, slowly modulate high pressure through injector by opening high side manifold valve so product flows into system. Close manifold valve and allow a few seconds for Injector to stabilize to low side pressure.
5. Remove manifold and Injector from the system service ports and replace caps. Remove Connect Injector Tool so it can be used for the next installation – do not discard. Properly discard black colored Injector.



**Note:** Use two canisters (4057-56) or eight fluid ounces for A/C systems between 5-10 tons. For larger A/C systems, approximately 15% of the oil charge needs to be A/C Re-New. Remove equal amount of existing oil first.

Read and understand the product's label and Safety Data Sheet ("SDS") for precautionary and first aid information. The SDS is available on the Nu-Calgon website at [www.nucalgon.com](http://www.nucalgon.com). Always wear protective eye wear and gloves when handling any NU-Calgon product.

