# Nu-Calgon Product Bulletin

# **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 Universal Treatment Injector, part no. 4779-0.

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 Universal Treatment Injector for all service trucks in the organization.

#### Packaging

1 quart (32 fl. oz.)	4057-54
4 fluid ounce can	4057-55
Universal Treatment Injector	4779-0
A/C Re~New Connect Inject	4057-56
Connect Inject Tool	4155-01

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

- Improved lubricity through reduced friction drag
- $\checkmark$ Cleaner system
- Quieter operation



# A/C Re~New with Flow Control Valves

 $\checkmark$ Resolves sticking reversing valve and TEVs due to friction

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

 $\checkmark$  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	Outdoor	Average Running amps	Average Running amps	% Savings
units tested	Temperature	<i>Before</i> A/C Re~New	<i>After</i> A/C Re~New	
26	73.3°F	15.8	14.1	10.8%
12	56.4°F	17.4	16.5	5.2%

#### **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.	Average Air Duct Temp.	Temperature
Before A/C Re~New	After A/C Re~New	Drop
57.4°F	54.2°F	3.2⁰F

#### 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.



#### **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).



Without A/C Re~New

\* Data available upon request.



With Zerol Ice

With A/C Re~New Fewer Scars