Total System Protection

A/C EasySeal

- **Prevents refrigerant leaks and seals existing leaks in air conditioning and refrigeration systems permanently**
- **Eliminates expensive leak search and repair**
- **Travels with refrigerant to find leaks fast**
- **Utilizes a reusable hose**



Application:

One of the most difficult and costly tasks for the service technician is servicing a system that has a refrigerant leak. And given today's requirements for leak management and repair, it is very important that leaks be repaired. A/C EasySeal addresses the need for a quick and reliable method to seal these problematic leaks permanently. In fact, it can be used to prevent leaks.

Description:

A/C EasySeal is designed to prevent as well as repair leaks anywhere in the system, including condensers, evaporators, copper lines, and soldered joints. It is easily injected into the system, traveling with the refrigerant, searching for leaks. The fact that A/C EasySeal travels with the refrigerant is very important to its ability to find leaks faster, using less sealant than those sealants designed to mix and travel with the systems oil.

The A/C EasySeal circulates through the system with the refrigerant seeking out leaks rather than migrating slowly with the oil…keeping in mind that only a small portion of the system oil actually migrates with the refrigerant through the system.

A/C EasySeal will react with moisture or air that is naturally present at a leak, forming a secure seal. A/C EasySeal is compatible with the refrigerant, oil and all system materials and it will not react until it comes into contact with the air and moisture at the leak, forming a permanent seal.

A/C EasySeal is a time saver. It finds leaks quickly and seals them, saving the time and money required in searching for the smallest leaks. With A/C EasySeal, the contractor is able to just add a can to the system and be confident the leak has been fixed and move on to the next job.

In most cases, one can will seal systems that have lost all refrigerant in as little as seven days and is designed for large systems up to 5 tons. For systems 1.5 tons to fractional, use A/C EasySeal-SS.

Packaging

A/C EasySeal	2.5 oz. pressurized can Treats 1.5 - 5 tons	**4050-06**
A/C EasySeal	"2+1" Display Pack	**4050-02**
A/C EasySeal-SS	1.23 oz. pressurized can Treats fractional to 1.5 tons	**4050-01**
A/C Piercing Valve and Hose		**4051-99**

Directions for Use:

Read all directions and warnings before using.

Note: For professional use only. Wear safety glasses and protective gloves. Use in accordance with all regulations and proper service practices in handling of refrigerant.

Important: A/C EasySeal can be used to seal most refrigerant leaks where the entire charge is lost as quickly as 7 days. Additionally, the following should be addressed prior to charging A/C EasySeal:

1. Other than for the loss of refrigerant due to the leak, the system should be operating within reasonable pressure/temperature conditions and parameters.
2. System should be free of contaminants. If necessary pull vacuum to remove non-condensables. If moisture was present, it may be advisable to use A/C EasyDry. And if an acid condition is known to exist, use Rx-Acid Scavenger.
3. If necessary (i.e. restrictions due to plugging), change drier cores.
4. If the refrigerant leak was considerable, it may be appropriate to add refrigerant just to bring system closer to normal operating conditions. Final refrigerant charging or "top-off" will still be necessary as a last step.
5. A/C EasySeal should only be installed as instructed and only on low side. Can is pressure rated to 270 psi, and exceeding this pressure could result in rupture and possible injury.

Failure to address these items or conditions may result in damage to the system or the compressor.

If system's low side pressure is below 65 psi while running (R-22):

1. Shake can well. Make sure system is running and low side is below 65 psi.
2. Be sure piercing valve handle is turned fully counter clockwise and then attach piercing valve to can.
3. Attach other end of charging hose to low side service port. As this is done, there will be a very small release of system charge that will purge air from the hose.
4. Turn piercing valve handle fully clockwise to pierce can. Invert can and hold above low side service port.
5. While inverted, turn piercing valve handle counter clockwise to install A/C EasySeal. Allow approx. 1 minute for product to completely enter the system.
6. Once product is dispensed, remove hose from low side service port. Retain hose for future installations and dispose can properly.
7. Charge with refrigerant to achieve correct system pressure. DO NOT overcharge.
8. Run system continuously for a minimum of 1 hour to allow product to fully circulate through system.

FIGURE 1



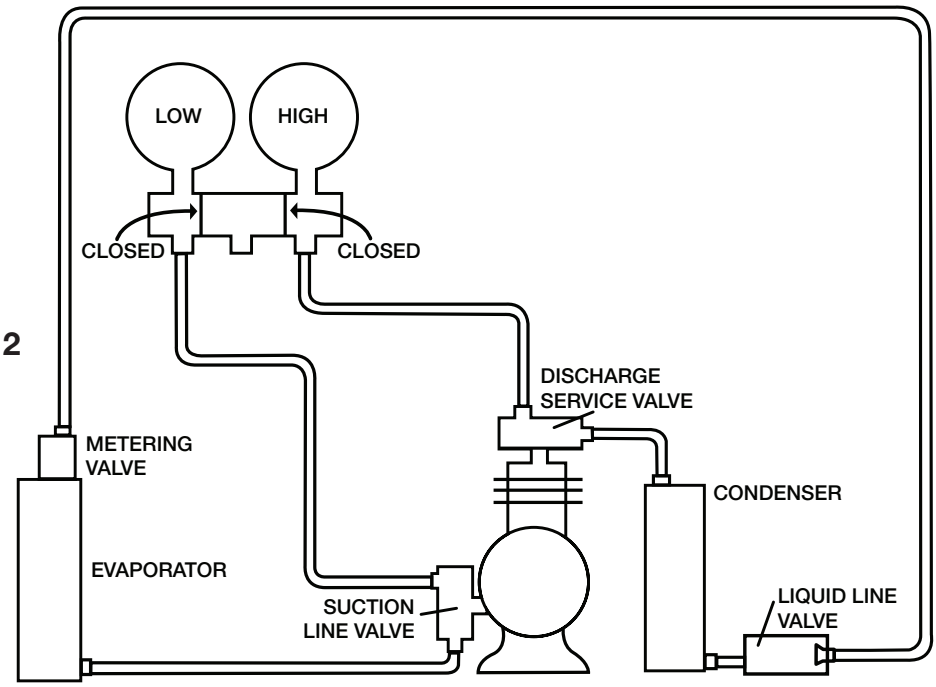
If system's low side pressure is ABOVE 65 psi while running (R-410A):

IMPORTANT: Product is to be injected only after the system has been pumped down and the low side has a pressure of 40-50 psi. Since low side pressures in a R-410A system are higher than the pressure in the A/C EasySeal can, you must first pump down the system to inject the product. To do so, follow the below instructions.

1. Secure electric power to the unit and connect the refrigerant manifold, as shown in Figure 2.
2. Close the liquid line valve and turn the compressor on to start pumping refrigerant into the condenser.
3. Operate the compressor until the suction gauge on the manifold shows a pressure of 40 to 50 psi (lower pressure than what is in the can). CAUTION: Do not pump completely down as low pressure cut-off or high pressure relief could engage.
4. When the pressure on the suction gauge is between 40 and 50 psi, turn the compressor off and immediately close the suction line valve. This procedure traps most of the refrigerant in the condenser allowing you to inject the A/C EasySeal. (Be sure the pressure in the low side is between 40 and 50 psi)
5. Shake can well. Be sure piercing valve handle is turned fully counter clockwise and then attach piercing valve to can. Be sure not to cross thread or over tighten.
6. Attach other end of charging hose to low side service port. As this is done, there will be a very small release of system charge that will purge air from the hose. Additionally, where permissible by law, the hose can be purged by slightly unscrewing the piercing valve from the can allowing the system's charge to enter and purge the hose.
7. Turn piercing valve handle fully clockwise to pierce can. Invert can and hold above low side service port.
8. While inverted, turn piercing valve handle counter clockwise to open valve and install A/C EasySeal. Allow approximately 1 minute for product to completely enter the system.
9. Once product is dispensed, close piercing valve and remove hose from low side service port.
10. After the charging hose is disconnected from the system, open the valves to allow the refrigerant back into the rest of the system. Charge system with refrigerant to achieve correct system pressure. DO NOT overcharge. Run the A/C system continuously for 1 hour to allow product to fully circulate through system.

REUSABLE PIERCING VALVE AND HOSE, DO NOT DISCARD.

FIGURE 2



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.

Frequently Asked Questions:

What is A/C EasySeal?
It is a sealant formulated specifically to seal refrigerant leaks in air conditioning and refrigeration systems.

How does A/C EasySeal work?
It is activated by moisture or air, both of which will exist at a leak. Once activated, it forms a permanent chemical weld at the site of the leak. Its behavior is similar to blood clotting to form a scab.

How much A/C EasySeal should I use?
Generally, one can of A/C EasySeal should be used in 1.5 to 5 ton systems. A/C EasySeal-SS should be used in small fractional horsepower systems under 1.5 tons or 18,000 Btu/h and can also be used to seal leaks in automotive A/C systems. Ultimately, the size of the leak, not the system's tonnage, will determine how much sealant is needed.

How large of a refrigerant leak will A/C EasySeal repair?
Generally, if the system doesn't leak its entire charge in 7 days, A/C EasySeal will repair it.

Once in the system, how does A/C EasySeal behave?
It travels with the refrigerant, behaving much like a vapor or mist.

When should A/C EasySeal be used?
Whenever a leak exists and traditional methods of finding and repairing it are costly or not practical. Also, it can be used to prevent leaks by sealing them as they occur.

How long does it take to seal?
Approximately 20 minutes.

What if there is moisture in the system?
At industry accepted levels of moisture*, A/C EasySeal will not react within the system due to the very low amount of moisture in circulation. A/C EasySeal is designed to react at higher levels of moisture saturation (relative humidity) found at a leak site, not at sparse moisture levels found in most systems. If moisture is suspected or determined to be above these accepted levels, use A/C EasyDry 20 minutes prior to addressing the leak with A/C EasySeal.

*For POE lubricant systems: <100 ppm
For mineral/alkylbenzene lubricant systems: <50 ppm

Is A/C EasySeal compatible with refrigerants?
Yes, it is fully compatible and miscible with CFC's, HCFC's, HFC's and hydrocarbons.

Will A/C EasySeal clog valve core or Schrader valve?
No it will not. But, if core is leaking during normal system operation, A/C EasySeal will seal the leak. When used again, the reconnection process will break the seal.

Will A/C EasySeal harm the compressor or other system components?
No, it will not. It is compatible with all system materials, including materials of construction, refrigeration oil, refrigerant, compressor windings, etc.

Is the A/C EasySeal proven or established?
Yes, the chemistry has been used for over 10 years in various industries, including the military, automobile, and the Aerospace industry.

What size refrigerant leak will A/C EasySeal repair?
It will seal the smallest microleaks as well as much larger leaks that can be detected with gas leak detectors. In most cases, as long as the system's entire charge is not lost in a week or less, A/C EasySeal will fix the leak.

Does the volume of system's refrigeration oil affect using the product?
No, it does not since the product travels with the refrigerant.

How long will A/C EasySeal remain in a system?
Indefinitely, or until the system's refrigerant is removed

What happens to A/C EasySeal if the refrigerant must be reclaimed?
Because A/C EasySeal travels with the refrigerant, when the refrigerant is reclaimed, the sealant will be reclaimed as well. The benefit is that no sealant is left in the system when it is opened for repair.

What happens to A/C EasySeal if the system is pumped down for repair?
The sealant will travel with the refrigerant and consequently, be stored in the condenser while the system is being opened for repairs. Because A/C EasySeal travels with the refrigerant and not the oil, that portion of the system can be opened for repair without concern.

Can A/C EasySeal be used in R-410A systems? In heat pumps?
Yes to both. In R-410A applications, use the directions on the inside of this bulletin to inject.

Will A/C EasySeal damage recovery equipment?
No, as long as the equipment is properly maintained to the manufacturer's specifications, and the equipment should be free of moisture and air. Refrigerant should be reclaimed as used refrigerant.

Can multiple cans of A/C EasySeal be used in larger commercial systems?
Yes, but it is recommended that the contractor start with one can and monitor the system thereafter. Remember, it is the size of the leak, and not tonnage, that determines how much sealant is needed.

How do I inject A/C EasySeal-SS into an automotive A/C system?
Inject it just as you would in a small stationary R-22 A/C system; make sure you have the proper R-134a charging hose to fit the low side charging port on the automobile A/C system.