REFRIGERANT OIL ADDITIVE INSTALLATION GUIDELINES

1. Installation should be done only by a qualified licensed A/C or Refrigeration technician.

2. Determine the proper amount of ARTIKOOL to be installed into the unit(s). This is usually 5% of the compressor's oil charge.

3. Use a standard hand held refrigeration oil pump for the installation. These pumps usually deliver between 1.0 and 1.5 ounces of product per stroke. Predetermine your pump's capacity so you will know how many strokes are necessary.

4. Attach a standard refrigerant gauge hose to the pump with the Schrader valve needle depressor end being the loose end.

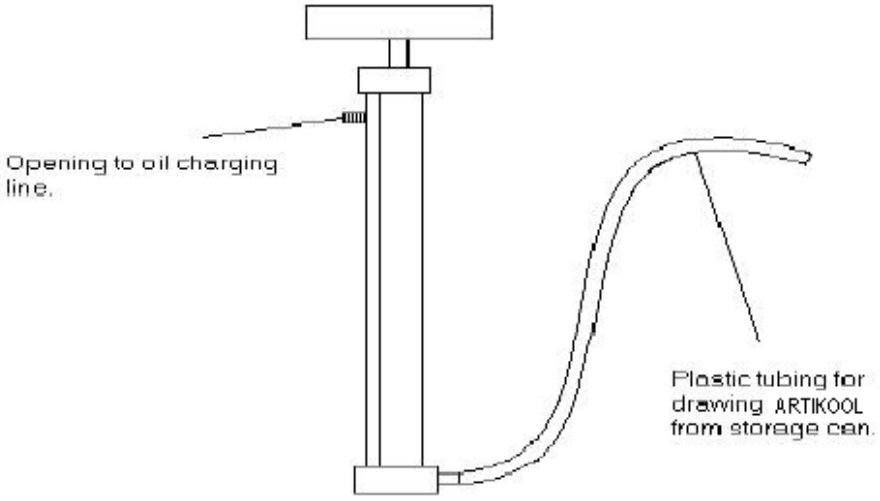
5. All air should be purged from the hose. Stroke the pump until the hose is completely filled with ARTIKOOL.

6. Attach the pump hose lightly to the Schrader valve of the suction line of the compressor. Stroke the pump until a small amount of ARTIKOOL runs out and covers the Schrader valve. This insures all air is fully purged from the line.

7. Tighten the hose on the Schrader valve, and pump in the correct amount of ARTIKOOL.

8. Disconnect the hose from the suction line Schrader valve; the installation is complete.

Hand held Refrigeration Oil Pump



INSTALLATION

Prior to installing Artikool be sure safety switches for both high- and low-pressure are properly working.

Coking, the triggering of hydrocarbons from lubricants, can occur in most compressor oils as a result of time and temperature. Adherence to the inside of the compressor and tubing, as well as partial blocking of dryers in the system, can occur by these hydrocarbons. Artikool will cause displacement of these hydrocarbon deposits.

Avoidance of additional problems is achievable by exchanging current dryer if coking is suspected to have occurred. Current dryer should be switched with a core dryer having filter elements that can be changed without requiring system draining. For severely tainted systems a suction line dryer should be installed.

Artikool is uncomplicated and economical to install. Normally, Artikool is put in the low-pressure side of a compressor system. (Be sure to thoroughly shake product prior to installation.) The recommended proportion is one fluid ounce maximum per ton of air conditioning (12,000 BTU) for systems less than ten tons. Units bigger than ten tons normally require about 10% maximum of the oil volume. This percentage to install hinges on the unit's make and type, so each must be evaluated individually. In order to speed up the action of Artikool, a small share of the suggested treatment measure of the product can be inserted safely into the high-pressure area of the system. This will cut the time it generally takes Artikool to arrive at the evaporator core. It is strongly recommended to shut the system down if adding Artikool to the high-pressure line. This will allow pressure in the system to decrease.

The oil/lubricant in large business and manufacturing compressors require changing on an intermittent basis. When it becomes necessary to change the oil in your compressor, it is unnecessary to completely re-treat with Artikool. Add only a reduced amount of the original treatment quantity, usually 10-50% of the original volume of Artikool used, determined by the type of compressor. This will assure that the system will continue to have the full benefit of Artikool protection.

The system must be examined at least 2 – 3 times during the initial 12 to 14 days following putting in Artikool. Oil level in compressor must be supervised particularly on reciprocating compressors. Super heat must be inspected for the unit because blockages in the dryer system are indicated by a temperature difference.

Should salvaging the refrigerant be desired, it is not necessary to repeat treatment with Artikool. This is because the particles bond to the inner metal surfaces of the compressor, evaporator, and condenser due to the polarization.

Notes:

1. It is desirable to have the compressor running while installing. However, the unit should be started now if it was not running during installation. This will allow the oil to completely flow through the system.

2. Between 2 and 3 days after Artikool installation, check the dryer filters, one day on older units of 10+ years. This will tell when filters and expansion valves need to be replaced due to Artikool's cleaning process. These can become stopped up and damage the compressor unless they are changed. If the unit is more than three years old it is imperative they be checked. If it is less than three years old it is not as important to check valves and filters, however it is a good procedure to follow.

MORE ABOUT ARTIKOOL

Chlorine-free Artikool is a covalent polarized refrigerant oil additive. Every kind of cooling equipment can use this P.R.O.A. such as coolers/freezers, a/c, heat pumps, chillers, and refrigerated trucking.

An exceptional blend of natural and synthetic oils is used to make Artikool. Metal and primary lubricants treated with Artikool are defended against friction, which causes heat, wear and corrosion that can occur when a compressor operates. Able to blend with any refrigerant or non-silicon oil for compressors, Artikool is a conditioner and film strength builder.

Additionally, wear is reduced through Artikool's thermal stabilizer which, enables compressor fluid to run in extreme temperatures of –40 degrees F to +300 degrees F.

Artikool increases the compressor oil film strength helping to prevent abnormal wear which can occur as a result of "mixed film" lubrication. This "mixed film" condition occurs when there is sporadic surface-to-surface contact. This sporadic contact results from temperature increases or irregular loads.

Lubrication is vitally important to keep the tiny imperfections, visible only under magnification, from meeting and interlocking with those on the opposite side. Artikool works to prevent the interlocking and resultant break-off particles of metal. Artikool also lowers energy usage needed to keep the parts moving when metal imperfections meet and thus reduces excessive high temperatures and deterioration. The protection Artikool provides is different from current a/c compressor lubricants in that it lubricates with a coating action which remains on all metal surfaces, including invisible flaws, to keep metal parts apart.

There is no tainting of compressor oil because there are no phosphate compounds, heavy metals, chlorides or plastics in Artikool. Thus, when disposing of waste oil there are no additional environmental troubles. Also, unlike other additives with halogenated hydrocarbons (i.e. chlorinated olefins) Artikool will not form acidic compounds leading to erosion of compressor parts.

Artikool usually gives a quick return on investment through lowering cooling costs. It then goes on saving energy and operating expenses through reducing friction and head pressure in the compressor, thus improving compressor life, cutting compressor run time and even reducing friction for smoother compressor operation.

Understanding Refrigeration

To assist in realizing how Artikool helps refrigeration systems a simple explanation of those systems follows. A refrigeration system contains refrigerant, whose flow is controlled by the metering device into the evaporator. The evaporator is a means for absorbing heat into the refrigeration system. The compressor compresses from the evaporator (low-pressure area) to the condenser (high-pressure area). In the condenser the heat is removed from the refrigeration system.

Artikool Insulates = Greater Efficiency

Artikool molecules adhere to the inside of the condenser and evaporator coil tubing, just as the minor portions of compressor oil in refrigerants do. These operate as insulation to reduce the heat transfer ability of the condenser and evaporator. However, there is a major difference between Artikool and regular compressor oil. The tubing on the inside of the condenser and evaporator share electrons with the molecules in Artikool, so that Artikool takes the place of the compressor oil. Unlike the oil though, Artikool maintains a one molecule thick covering since the molecules are polarized to repel one another. These abilities enhance the system's capacity to transfer heat and reduce rust and corrosion.

This better heat transfer ability results in reduced work by the compressor and set points being reached earlier since the evaporator coils are cooler. Therefore, the compressor works less time, which saves money, especially when combined with the reduced friction enabled through the lubricating qualities of the product.

Additional Advantages:

Besides all of the tremendous benefits Artikool renders to refrigeration and a/c units that are mentioned above, Artikool will also reduce valve noise, maintain seal pliability, reduce scuffing, scoring and welding, reduce oil foaming and it does not possess ingredients that will retain moisture.

LIMITED THREE YEAR WARRANTY

The manufacturer warrants that its Artikool oil additive contains no harmful ingredients that may impair metals, seals, or gasket substances, and will not be the source of material damage to any mechanically suitable parts when used in conformity with the company's counsel and directives. When Artikool is accurately put in, the makers of Artikool will repair or replace any compressor verified to be damaged solely by the product. This warranty is limited to actual damage to treated equipment, and does not include incidental or consequential damages or damages of any other kind or character. This warranty shall not apply to any product that has been subject to misuse, abuse, mishandling, tampering, spillage, contamination during or after shipment, or any defects or damage caused by improper handling or storage.

Artikool vs. Chlorinated Olefin Products

	Artikool	Chlorinated Olefins
Chlorine Free Formulation	Yes	No
Improves Heat Transfer	Yes	Yes
Saves Energy	Yes	Yes
Performs Over Wide Temperature Range	Yes	No
Increase Lubricity	Yes	Yes
Extends Equipment Life	Yes	Yes
Reduces Noise and Vibration	Yes	Yes
Reduces Friction	Yes	Yes
Acid Formation Potential	No	Yes
Contains Acid Scavenger	Yes	Some
Rust Protection	Yes	No
Cleans and Restores Older Systems	Yes	Yes
Maintains Efficiency of New Systems	Yes	Yes
Reduces Run Time	Yes	Yes
Anti-Weld Protection	Yes	No
Contains Anti-Oxidation Agent	Yes	No
Gasket, Seal Conditioner	Yes	No
Performs with All Refrigerants	Yes	No
Inhibits Non-Ferrous Corrosion	Yes	No
Long Shelf Life	Yes	No
Hazard Waste Disposal Problem	No	Yes
Affinity for Moisture	No	Yes
Corrosive	No	Yes
Extreme Pressure Lubrication	Yes	Yes
Compatible with All Compressor Oils *	Yes	No

* Except Silicon type compressor oil