

Refrigerant Story

History of refrigerants:

In 1991, the Conference on Global Warming was held in Montreal, Canada. The environmental scientists explained the depletion of the Ozone layers protecting the Earth, to the representatives of each country which attended the conference.

The Scientists explained to the Representatives of each Country that refrigerant gasses, that contain chlorine, are being released into the atmosphere, and the chlorine was rising up into the upper Stratosphere, where Ozone is found. Chlorine was breaking down one of the Oxygen (O₃) molecules to form simple Oxygen (O₂) molecules which the sun can burn clear through.

The 'Montreal Protocol' was signed by many countries which stated, starting in 2010, each country would cut back the production of chlorine based refrigerants by 20% per year, terminating the production in 2015.

President Clinton elected to move the date for the USA, up 3 years, starting in 2007 terminating the production in 2012. The EPA outlawed the release of any refrigerant gas into the atmosphere and requires reclaiming and recycling of all refrigerants.

Manufactures Option:

For the first time the manufactures developed an alternate style refrigerant called R-410A or Puron. This is a butane based, flammable gas and operates under high pressure (between 400-800lbs). Special units are being built for this type of refrigerants. The installation techniques



have changed radically and must be adhered to precisely. Such as, the old existing refrigeration coil and lines contain microscopic amounts of mineral based oil, which will damage the compressors and should not be re-used. The R-410A gas containers have an explosion property of 125 deg. Fahrenheit. Adding refrigerant to a system might require removal of all the remaining refrigerant gas. The extended amount of time needed to clean out the refrigerant system plus the expense of the refrigerant can be very expensive to repair the unit for the homeowner. This is not acceptable and needs to be averted.

Protecting the environment:

Everyone can agree that being responsible to the atmosphere is vital to our continued way of life. We are being told that these new refrigerants are "environmentally safe". We disagree, even though the chlorine had been removed the floral-carbons are a pollutant to the lower atmosphere. The R-410 is a dangerous, high pressure, flammable, type of refrigerant.

NU-22 replaces the chlorine types:

A manufacture from the U.K. has developed the NU-22, (R-422B) non-chlorine, *low pressure*, non-flammable hybrid type of refrigerants to replace the old R-22 chlorine type, to be used only in low pressure units. Conversion is simple, just charging the system with the alternative type to be environmentally sound. This is the wave of the future and as the old R-22 is



eliminated, this will be around for the next 20+ years.

Selecting the correct refrigerant:

Today you need to make a decision as to which type of refrigerant gas you will be using. High pressure or low pressure refrigerant is the question. Once selected, you will need to stay with that type. Refrigerant leakage is a very common problem for a/c units for many years. The likelihood of having a leak develop in a high pressure system is much greater than ever before. This can translate into a very expensive leak check and repair. A full refrigerant charge would be needed at a considerable cost.

The efficiency difference between a 13.0 SEER unit and a 16.0 SEER unit is about \$100. a year. That's about \$18.00 per month, not that big of a savings compare to a \$1,500. repair bill.

Low pressure systems are becoming harder to come by. Most manufactures' now only offer the high pressure units because they now control the patented on the Puron/R-410A and want all new unit to be high pressure. This is the first time the manufactures get the increased income of the price mark-up of the refrigerant! Good for them, bad for homeowners.

It's time to get the facts clear before purchasing a new air conditioning system. Environmental concerns are overwhelming our everyday life. Be informed.

Call us for more details:(818) 790-8000