

IMPORTANT INFORMATION FOR OUR CUSTOMERS
THE WORLD OF HEATING AND COOLING
IS CHANGING: BECOME INFORMED
– BE A BETTER CONSUMER!

R-22 THE MOST COMMON REFRIGERANT IS BEING PHASED OUT!

What is happening? Big changes are being implemented for the refrigerants in heating and cooling equipment. Beginning January 1, 2010, all of the world's manufacturers of cooling and heating systems will be using 100% of the refrigerant called R-410A to replace the refrigerant commonly used up to this point called R-22. Manufacturers are able to sell any equipment they have created before January 2010 with R-22 until their inventories are depleted. After that, all equipment installed will have to use R-410A refrigerant. This change will have an economic impact in the form of increased costs for consumers.

Why? A 1987 Treaty set in motion changes believed to end ozone depletion.

A change was set in motion in 1987 when the "Montreal Protocol of 1987" was established. Known formally as the **Montreal Protocol on Substances That Deplete the Ozone Layer**, it is an international treaty designed to protect the ozone layer by phasing out the production of a number of substances believed to be responsible for ozone depletion. The treaty was opened for signature on September 16, 1987, and has undergone seven revisions. It is believed that if the international agreement is adhered to, the ozone layer is expected to recover by 2050. It has been signed by 196 states/countries worldwide.

The Facts VS. Myths

- The refrigerant R-22 has been put in air conditioners and heat pump systems since 1960. It is being phased out because of the "Montreal Protocol 1987". According to the US Environmental Protection Agency, R-22 is a greenhouse gas, the manufacturer of which, results in a by-product that contributes significantly to global warming.
- The production of R-22 refrigerant is expected to be phased out of production by 2020. This year alone, production of this refrigerant is expected to be reduced by 47% and by 85% by 2015.
- The new refrigerant, R-410A, is designed and constructed to be used for R-410A systems and R-22 systems cannot be retrofitted to operate with R-410A.
- R-410A is a blend of two gases that operates at significantly higher pressures.
- R-410A requires special cylinders, gauges and recovery equipment.
- R-410A leaks generally result in the loss of one of the blended gases and not the other. This means if there is a leak in a system, the remaining gas that turns to liquid, will have to be removed and destroyed. It will then have to be replaced with fresh R-410A. This is different than what happened with R-22 – if gas was lost then adding a "charge and topping it off" was a common practice.

What does this mean for repairs? It depends on whether the repair is R-22 or R-410A

- If service or repair of an R-22 system requires the addition of R-22, as long as it is available, these repairs will be able to be made. Due to the decrease in supply of R-22 over the next 10 years, this will result in a cost increase. This increased cost will necessarily have to be passed along to the consumer.
- If R-410A equipment develops a leak requiring repair, this will result in the need to completely remove any remaining refrigerant, have it destroyed and put all new refrigerant into the system. This is because when this blended gas leaks... there is a portion that is gaseous and another portion that is liquid. When there is a leak it causes the refrigerant to separate and the gas portion to leak out leaving the liquid portion. This means that the integrity of the refrigerant has been destroyed and must be replaced.

What does this mean for installation of new equipment? A lot and it depends.

If you have an R-22 split system, where the outdoor condensing unit needs to be replaced,

- It will no longer be possible to just replace the outdoor condensing unit alone, **unless there is some pre-January 2010 R-22 equipment inventory available.**
- Based upon the information **AirNow** has obtained, Goodman is the only manufacturer that still has R-22 equipment available in its Phoenix area warehouses. It is projected that their **inventory may only last until June of this year.**
- If R-22 equipment is **no longer available** and you need an outdoor condensing unit, then **you will have to replace the outdoor condensing unit** as well as the indoor coil or air handler with equipment designed to operate with R-410A equipment. (In some instances, if the indoor coil is only a couple of years old on an R-22 system, it may not be necessary to change the coil or air handler.)
- The increased cost for equipment replacement could be as low as \$600 to \$2200 depending upon the style and size of the unit.

THE GOOD NEWS

– UPGRADE NOW AND SAVE \$\$\$\$ - REUSE LINESETS – NEWER AIR HANDLER DESIGN

- **UPGRADE NOW:** While supplies last you could upgrade your system with an R-22 outdoor condensing unit for a split system. The national average for the life span of a heating and cooling system is 19 years... in Arizona it is 12. You may want to consider replacement now if your unit is between 12 and 19 years old.
- **LINESETS:** We can reuse the line set of an R-22 unit if it is in good condition by flushing it out with a special cleaner and there are not any oil traps within it. A myth out there is that we have to change the line set. Replacing the line set can cost anywhere from \$477 to \$890.
- **AIR HANDLERS:** If your air-handler fails on an R-22 system, **the good news** is that new air handlers and their coils are designed to operate with either R-22 or R-410A refrigerant.



HAVE QUESTIONS: GIVE US A CALL AND/OR GOOGLE “Montreal Protocol of 1987”
OR VISIT THE ENVIRONMENTAL PROTECTION AGENCY WEBSITE AT www.EPA.gov .