

# R-22 AND YOU

## WHAT YOU NEED TO KNOW.



Frequently asked questions about the phasing out of R-22 refrigerant, as mandated by the Clean Air Act and regulated by the U.S. Environmental Protection Agency (EPA).

### **WHAT IS R-22?**

R-22 (also known as HCFC-22) is a refrigerant commonly used in air conditioning equipment and other applications. It is a type of manmade chemical known as hydrochlorofluorocarbons (HCFCs).

### **WHY IS IT BEING PHASED OUT?**

The release of HCFCs and other manmade chemicals into the atmosphere have depleted the Earth's protective ozone layer and created an "ozone hole" over the South Pole. Restricting and eventually banning the production and use of HCFCs and other ozone-depleting chemicals will allow the ozone layer to eventually return to its normal level. Scientists estimate that with a worldwide phaseout of ozone-depleting substances, the ozone layer will recover by about 2075.

The phaseout of R-22 is part of a worldwide initiative, the Montreal Protocol on Substances that Deplete the Ozone Layer, to end the use of all ozone-depleting chemicals.

### **WHY IS THE OZONE LAYER IMPORTANT?**

The Earth's ozone layer protects the planet from the sun's harmful ultraviolet radiation. Depletion of this shield means more radiation reaches the Earth's surface where it can harm people and ecosystems.

### **WHAT WILL REPLACE R-22?**

The most common non-ozone-depleting refrigerant in use today is R-410A, known by trade names PURON®, SUVA® 410A and GENTRON AZ-20®.

### **WHEN DOES THE PHASEOUT OF R-22 BEGIN?**

In the United States, the phaseout begins on January 1, 2010, when the U.S. bans production and import of R-22 for new equipment only. This means that all new air conditioning equipment produced in or imported to the U.S. must use R-410A or another alternative refrigerant. R-22 can still be produced or imported for servicing of existing equipment.

### **HOW IS THE PHASEOUT STRUCTURED?**

There are four major steps to the phaseout of R-22:

2010 – Ban on production, import and use of R-22 and HCFC-142b, except for continuing servicing needs of existing equipment.

2015 – Ban on production, import and use all HCFCs, except for continuing servicing needs of refrigeration equipment.

2020 – Ban on remaining production and import of R-22 and HCFC-142b. After 2020, the servicing of systems with R-22 will rely on recycled or stockpiled quantities.

2030- Ban on remaining production and import of all HCFCs.

### **WHY IS THE PHASEOUT OVER SUCH A LONG PERIOD?**

The phaseout has been designed to allow adequate time to switch to ozone-friendly refrigerants as part of normal equipment replacement, so consumers and businesses can avoid having to replace equipment that still has useful life.

### **WHAT EQUIPMENT DOES THE R-22 PHASEOUT AFFECT?**

R-22 is used in numerous commercial and industrial applications, but for homeowners the most direct impact of this phaseout is in home air conditioners and heat pumps.

### **CAN I STILL USE MY R-22 EQUIPMENT?**

Yes. There is no ban on the use of R-22 equipment made before January 1, 2010. You are not required to replace existing equipment.

### **CAN I STILL REPAIR EXISTING R-22 EQUIPMENT?**

Air conditioners, heat pumps and other systems that use R-22 may still be serviced, maintained and repaired, and R-22 will still be available for use in equipment made before 2010.

### **Can R-22 be mixed with R-410A in a system?**

No. R-410A can only be used in a system designed for the higher pressures and unique characteristics of this refrigerant.

### **CAN R-22 EQUIPMENT BE MODIFIED TO USE R-410A?**

It is possible to switch to R-410A or another alternative refrigerant in an existing R-22 system, but this requires significant modifications of the equipment.

### **CAN I STILL PURCHASE AN R-22 SYSTEM?**

There is no ban against purchasing systems using R-22, but after December 31, 2009 manufacturers are no longer permitted to produce or import R-22 systems.

### **HOW DO COSTS COMPARE BETWEEN R-22 AND R-410A EQUIPMENT?**

Currently, a new R-410A system is slightly more expensive than a comparable R-22 system. Other factors should be considered, including the long-term cost and availability of R-22 refrigerant and parts, energy efficiency, performance and reliability.

### **HOW DOES THE ENERGY EFFICIENCY COMPARE BETWEEN R-22 AND R-410A EQUIPMENT?**

There are both R-410A and R-22 systems that qualify for the ENERGY STAR® rating, which means the system is at least 14% more efficient than a standard new system. However, R-410A systems offer the additional advantage of using a non-ozone-depleting refrigerant.

### **HOW WILL THE PHASEOUT AFFECT R-22 EQUIPMENT REPAIR IN THE FUTURE?**

As the phaseout continues, R-22 refrigerant will become more scarce and parts will be less common. This means service and maintenance of these systems is likely to be increasingly more expensive and less convenient in years to come.

### **HOW CAN I MINIMIZE THE IMPACT ON THE OZONE LAYER WITH MY EXISTING R-22 SYSTEM?**

The most important thing you can do is maintain your equipment. Major leaks rarely develop in properly installed and maintained equipment. However, it is necessary to service your system properly to minimize environmental damage and maintenance costs. Be sure to select a reliable service contractor who is EPA-certified to service equipment containing R-22.

### **HOW WILL THE PHASEOUT AFFECT R-22 EQUIPMENT REPLACEMENT IN THE FUTURE?**

Since R-22 equipment cannot be manufactured or imported after January 1, 2010, the availability of new R-22 systems will decrease each subsequent year. Of course, R-410A systems will be available as replacements.

### **ARE R-410A SYSTEMS AVAILABLE NOW?**

Yes. Systems that use R-410A or other non-ozone-depleting alternative refrigerants are available now and will become increasingly common.

### **ARE SERVICE CONTRACTORS TRAINED TO WORK ON R-410A SYSTEMS?**

Yes. Service contractors repairing and installing R-22 systems today should be technically capable of R-410A repair and installation as well. As the new systems become more common, more contractors will be familiar with them. However, it is a good idea to make sure that the dealer or contractor you use is trained in the installation and service procedures required for R-410A equipment.

### **WHEN WILL R-22 NO LONGER BE AVAILABLE FOR PURCHASE?**

R-22 will continue to be manufactured and imported until 2020 for service of existing equipment. After 2020, only recycled or reclaimed R-22 will be available. It is difficult to predict when supplies will run out, but the EPA anticipates that supplies should be available until most R-22 equipment is retired.

### **WILL R-22 EQUIPMENT PARTS CONTINUE TO BE AVAILABLE?**

No manufacturers have announced plans to stop producing R-22 repair parts. However, availability of parts in the future will be determined by normal market conditions.

### **CAN R-410A BE USED IN AN R-22 SYSTEM?**

R-410A cannot be used in an unmodified R-22 system, because it requires equipment designed for the higher pressures and unique characteristics of R-410A. Although it is possible to update an R-22 system for R-410A refrigerant, the modifications are significant and often cost-prohibitive.

### **CAN RECOVERED R-22 BE USED AGAIN?**

Yes. Under special circumstances, EPA regulations allow equipment to be recharged with recovered refrigerant – meaning refrigerant removed from the appliance and stored in an external container without testing or processing.

If the refrigerant is to be used in equipment with different ownership, it must be reclaimed or recycled. Reclaiming means reprocessing the refrigerant to meet industry standards with specialized machinery not generally available at a job site or repair shop. Recycling means extracting it and cleaning it for reuse without meeting the requirements for reclamation.

### **WHAT IS THE PROPER WAY TO DISPOSE OF R-22?**

Recovered HCFC refrigerants including R-22 should be sent to an EPA-certified refrigerant reclaimer. Only EPA-certified reclaimers may reclaim and sell used refrigerants to a new owner. Contractors may also send HCFC refrigerants to be destroyed. They must be completely destroyed at a destruction efficiency of 98% or greater, using one of the approved destruction technologies. In the United States, incineration technologies are most commonly used for this purpose.

### **IF I AM AN AHS CUSTOMER, WHAT WILL THE R-22 PHASE OUT MEAN TO ME?**

Since the R-22 refrigerant will be phased out gradually, AHS will continue to repair and replace with R-22 systems until the parts and systems are no longer available, within the EPA's mandated guidelines. When the supply inventory of R-22 related parts and systems have depleted and it is necessary to replace with R-410A refrigerant systems, American Home Shield will cover the cost to replace the air conditioner and its modifications necessary by the transition from R-22 to R-410A refrigerants. (Refer to the air conditioning section of the warranty contract for coverage details.)

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