

## Cross-contamination: some gases just don't mix

While the reuse of recovered refrigerant should be encouraged, the use of impure and contaminated refrigerants can result in systems operating inefficiently. This can cause excess power consumption and emissions, increased maintenance costs and ultimately system failure.

When refrigerant is removed from a system, with a view to reusing it in another system, it needs to be tested and cleaned in accordance with AHRI Standard 700-2019 Specifications for Refrigerants.

Impure refrigerants can, at worst, cause damage to equipment and, at best, result in lower product energy efficiency, driving up costs. It is critical that cylinders are clearly marked with the type of refrigerant they hold, so that cross-contamination is prevented.

Different refrigerants require different cylinders. For example, some flammable refrigerant cylinders require the cylinder to be reclassified and handled as a flammable compressed gas – like LPG.

### **To avoid the risk of mixing refrigerants:**

- Ensure correct labelling of refrigerant type in systems
- Identify refrigerant type in systems prior to recovery
- Ensure you have the correct type of cylinder and it is labelled with the refrigerant type.

### **Tamper-evident straps**

The use of tamper-evident straps is one way to deter, and identify, cross-contamination of refrigerants. These straps can be fastened to the access valve on the cylinder or the pipework. They don't stop someone from accessing the valve, but they do highlight if the integrity of the system has been tampered with.

### **Correct labelling**

A lack of labelling on cylinders and systems creates severe risks for technicians. If new labels are not fitted when refrigerant changes are made, it creates serious hazards for the next technician who comes along to work on the system. Correct labelling is critical for the safety of technicians and if you are aware of anyone not properly labelling systems, you should report them to ARC at <https://www.arctick.org/information/lodge-a-complaint/>.