

TECH TIP

ALTERNATIVE REFRIGERANT WARNING

The use of alternative refrigerants, for retrofitting R12 systems, has increased during the past AC season. Below are some concerns that need to be addressed before using any blend refrigerant:

- The use of a blend refrigerant will void your parts warranty. Regardless of any claims made by the blend refrigerant manufacturer, you will void your warranty. Currently, no OE AC system manufacturer will warranty their product with the use of a blend refrigerant.
- **BLENDS DO NOT BLEND.** The chemicals that make up the blend remain different chemicals and act differently in the system. They also leak out of the system at different rates, with the smallest molecules leaking first.
- Some blends advertise that the lubricant does not have to be changed when using their product. These blends use a small amount of R600 (Butane) or R600a (Isobutane) to stabilize the different chemicals and circulate the lubricant within the system. Normally, the percentage of these butanes (4 percent or less) is small enough to keep them from being a fire hazard. However, if the butane leaks out of the system, the lubricant stops moving and the compressor fails.
- There are some blends that are made of only hydrocarbons. The EPA has determined that the use of a hydrocarbon-based refrigerant in a mobile AC system (cars and trucks) is illegal.
- Many of the blend refrigerant manufactures compare the cost of converting to their blend, to the continued use of R12. The correct comparison should be to the use of R134a.

THERE ARE EXTRA COSTS FOR USING BLEND REFRIGERANTS:

- Current EPA regulations do not allow a blend refrigerant to be recycled on site (unless the end user has a captured fleet). The blend refrigerant must be shipped back to the original manufacturer of the blend or to a reclamation center to be recycled. Since it is a recovered refrigerant, it will have to be shipped as a hazardous material.
- The installer will have to purchase a new recovery machine for each type of blend, per EPA regulations.
- The installer will have to purchase new manifold gauge sets to match the unique fittings of each type of blend refrigerant, per EPA regulations.
- The installer will have to stock the blend-specific-unique-fittings to change the R12 service ports. EPA regulations require that each blend manufacturer develop fittings unique to that blend.
- EPA regulations require installing a unique colored label for each blend.
- Blends that contain R22 require all hoses to be changed to barrier hose, per EPA regulations.
- Blends that contain R22 require desiccant XH-9 in the drier. Due to cost, most drier manufacturers use XH-7, which is not compatible with R22.



Lubricant stops moving and the compressor fails.