

DOC'S BLOCKS
AUTOMOTIVE AIR CONDITIONING REPAIR

Question:

How does refrigerant become contaminated?

Answer:

Contaminated refrigerant was never a problem up until the late eighties. When a vehicle came in for service, the refrigerant was released into the atmosphere from a system. If someone mixed refrigerants or if there was air in the system, it was just released. Technicians didn't need to pay any attention to it.

When it was deemed that R-12 refrigerant harmed the ozone, blend and R134a refrigerants were introduced into the market place. The industry adapted R-134a as the refrigerant of choice. The market was introduced to blend refrigerants, which are a mixture of chemicals, blended to work the same as R-12 or R-134a. It is the law that all refrigerants must be recovered.

Herein lies the problem. Cross blend of refrigerants and air are the contaminations.

The law requires that vehicles that have changed the type of refrigerant used in the system, must have the proper retrofit service fittings installed. This informs the person doing the service, in the future, of what is in the system. These fittings screw onto the R-12 fittings and convert them to be used with the refrigerant being used. There is a label that should be attached to the unit stating the kind of refrigerant and oil and the amount that is in the system.

Commercial air conditioning technicians are using a blend refrigerant called MP46 or MP51. These refrigerants were approved for commercial use but not automotive. The high cost of R-12 entices these people to install this refrigerant into their personal vehicles. No labels or fittings are used. Many people are topping off units with R-134a into R-12 systems. They can buy R-134a but not R-12.

There are identifiers on the market, when connected to the system, will identify what is in the system. It is the crossing of refrigerants that contribute to the system contamination.