

DOC'S BLOCKS
AUTOMOTIVE AIR CONDITIONING REPAIR

Question:

How much refrigerant does the system hold?

Answer:

Generally, the capacity of a system is posted somewhere under the hood. Most vehicles are listed in specifications manuals. Older vehicles, late eighties and back are not listed anymore.

Technicians use many methods to arrive at the correct charge. Every automobile has a different size AC unit so therefore hold a different amount of refrigerant. Reading pressures and air delivery temperature are a technique used by many. This is not a preferred method of servicing.

The industry prefers that refrigerant be measured by the ounce and that all systems refrigerant be recovered and then reserviced with the correct amount. This is not a general practice by most technicians. To reduce cost of servicing, the systems are topped off when possible.

When retrofit started, it was publicized that systems should be charged at 85 % of an R-12 charge. It has been a known fact that posted charges for a system is based on an ambient temperature of 70 degrees. Throughout the south and southwest, it has been necessary to charge a system at a lesser amount because of the higher ambient temperatures. Technicians, working in high ambient temperature zones, charge a system at 70% of the posted charge. This works very well through a large ambient temperature range. The one application that this may not work is on automatic temperature control systems. These systems need about an 80% charge.

If the amount of charge is unknown or topping off a system, the best method to service is the sub cooling or superheat methods.