

*DOC'S BLOCKS*  
**AUTOMOTIVE AIR CONDITIONING REPAIR**

**Question:**

How is servicing done by the superheat method?

**Answer:**

When the amount of refrigerant the system holds is unknown, charge the system using the superheat method. This method is most commonly used on the orifice tube systems. The test is on the low side of the system. This method is used to top off a system as well as servicing a system with the least amount of refrigerant required to make the system operate. If the system is empty, install 70% of the posted charge and then test for superheat.

Measuring superheat is reading the pipe temperatures at the inlet to the evaporator and the outlet.

On the orifice tube systems, feel the top and the bottom of the accumulator. When the bottom is as cold as the top, the system is full. If the actual temperatures are to be read at the two pipes, there should be an equal to a three-degree drop from the inlet to the outlet pipes.

If testing a TXV system, read the temperature after the TXV and the outlet pipe at the evaporator. On the R-12 system, the drop should be 7-10 degrees. An R134a system should have 3 – 5 degree drop.

If unable to read the outlet pipe of the evaporator, with the system operating at 1500 RPM, read the low side pressure and convert that to temperature.

A system that has been disassembled for a TXV replacement need not be totally reassembled to service the system. Because of the location of the TXV, it is impossible to see the TXV with the evaporator case assembled. Install the valve, evacuate the system, and service the system, without the blower motor running. Read the superheat and look for the drop in temperature between the two pipes.