

AUTOMOTIVE AIR CONDITIONING REPAIR

Question:

How can one test for orifice tube o-ring bypassing or if the orifice tube was left out?

Answer:

A by passing o-ring on the orifice tube would be accompanied by higher low side pressures. How high would depend on how bad the o-ring is cut or whether or not it is in the system. There would be no cold air delivery. Leaving an orifice out of the system can happen on GM products that have the orifice in the condenser. On Fords, where the liquid line is the same on a couple different models, one with the tube that is replaceable and one that the tube is serviced with the liquid line. The suction line temperature would be about ambient temperature.

With the gauges connected, start the car and turn on the unit and allow the unit to idle. While watching both the high and low side gauges, increase the RPM sharply to about 2000 RPM. If the o-ring is in place and not cut, the low side pressure will drop to correct pressures as the high side increases to normal.

If the o-ring is cut or just bypassing, the low side pressure will tend to decrease but remain higher than normal. To confirm your findings, drop the engine to idle and turn off the unit. Watch the pressures equalize. If pressures equalize rather rapidly, that confirms the o-ring is not sealing or the orifice tube is missing

Another method to test for a cut o-ring is to read line temperature on both sides of the orifice tube. There should be a definite temperature drop. If there is a cut o-ring, the temperature would be nearly the same.