

AUTOMOTIVE AIR CONDITIONING REPAIR

Question:

Is there such a thing as forming a gradual restriction in the condenser?

Answer:

Yes! This started showing up with the use of aluminum compressors and the tube and fin condenser.

As a compressor grinds up, particles of aluminum get pumped into the condenser and rather than stop up the condenser, cause a buildup in the curved tubes at the end of condenser. This causes a restriction of flow through the condenser, which results in higher pressures and temperature in the compressor.

This condition is harder to pick up on because the condenser will be slightly higher than normal temperature. This is usually written off as being ones inability to read temperatures accurately.

The only clue that this condition exists is compressors leaking after a short time of operation. Generally, highway speeds cause the compressor to run faster, the flow would be greater, and the restriction would cause flow to reduce at the ends of the tube. This in turn would cause the compressor to run hotter and seals to melt.

This effects both new and remanufactured compressors. Several compressors may be installed on the vehicle before the condenser gets replaced. This leaves the installer with an attitude about the ability of anyone being able to produce a good compressor.

For proof of this condition, cut off the curved tubes at the end of the condenser pass and the restriction can be seen. It's like a stream going around a curve. Dirt will be deposited in the turn and a build up of material will eventually reroute the stream. In the condenser, it becomes a restriction.