

AUTOMOTIVE AIR CONDITIONING REPAIR

Question:

Must the system be evacuated before servicing?

Answer:

Contamination of a system is always of concern. Moisture in the system can cause freezing in the expansion valve and stop flow. Moisture also breaks down the oil in the system. It is important to work as clean and dry as possible.

Air is the greatest contaminate to the system. It contains moisture and doesn't carry heat. Pressures will be higher than normal and a decrease in cooling will take place.

Evacuation of the system is to remove the air and then the moisture. Moisture will boil under a vacuum and the vapor can be removed from the system. The amount of time required to evacuate the system will depend how long the system was open, how high the humidity is, and the outside temperature. A minimum of thirty minutes is required.

Referring to the vacuum chart, it is noted that moisture will not boil at a temperature below 59 degrees at 30 inches of vacuum. No amount of vacuuming will get rid of the moisture when it is too cold.

If the temperature is below sixty, create a false heat load. Hook up the vacuum pump, start the engine and slide the heat bar across to full heat on the controls, blowers on medium speed. Close down the hood and turn on the vacuum pump. About forty-five minutes should do the trick. The heat in the heater box and the heat under the hood will raise the temperature enough to allow the vacuum pump to get ride of the moisture.