

# **Air Conditioning System**

## Thermostatic Expansion Valve (TXV) Function Test

### **TXV OPERATION:**

The Thermostatic Expansion Valve or TXV is an interactive device that senses pressure and temperature then adjusts refrigerant flow to maintain a given superheat. Do not replace this device unless its function has been properly tested.

Perform the **“A/C System Operation Check”** first to ensure that there aren't any other possible restrictions to refrigerant flow. Look for frost, potentially caused by a restriction, on components such as the Evaporator, Receiver/Drier, Condenser and adjoining refrigerant hoses.

### **TXV FUNCTION TEST:**

- 1) A/C system is fully charged.
- 2) Blower motor set for high speed.
- 3) Engage compressor and allow A/C system to stabilize.
- 4) After 5- 10 minutes observe low side refrigerant operating pressures and record.
- 5) Change the blower motor speed to low and continue to watch the low side pressure. The pressure should drop ~3 – 4 Psig depending on the heat load in ~1 – 2 minutes.
- 6) Repeat this procedure 2 – 3 more times.
- 7) If the low side pressure can be influenced by changing the blower motor fan speed then the TXV is responding in the changing of the evaporator's heat load as designed.