

**Franklin County Career and Technology Center**  
**Skills USA~VICA District V Competition**  
**February 15, 2010**

**Contest:** Heating, Ventilation, Air Conditioning & Refrigeration

**Chairperson:** Kenneth Boxler

HVAC/R Instructor

Franklin County Career & Technology Center

**Phone Number:** (717) 263 - 9033 Ext.225

(Call Roberta Johnston)

**Scope of Contest:** 1. Installation of components.

- A. Install and program Thermostat
- B. Install filter dryer.

2. Service refrigeration systems.

- A. Cut, swage, flare, bend soft solder, silver solder and install copper tubing.
- B. Recover refrigerant from a system and store in external container using self-contained recovery system.
- C. Pump down a refrigeration system.

3. Troubleshoot electrical components.

- A. Verify compressor condition.
- B. Troubleshoot Heat Pump line voltage and control circuit.
- C. Troubleshoot Refrigeration System using superheat and subcooling methods.

**Equipment/Tools/Materials Provided by Host School:**

- 1. All heating, refrigeration and air conditioning units necessary for the problem.
- 2. Power supply for units.
- 3. Test equipment.
- 4. All tools and supplies to complete the contest.
- 5. All necessary information and material for judges and technical committee.

**Equipment/Tools/Materials Provided by Contestant:**

- 1. Safety goggles or safety glasses.

### **Clothing/Safety Requirements**

Jeans or work pants, work shirt, leather work shoes and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.) **Jeans or work pants must be tightened at the waist and be free of holes and that only shirts without writing or graphics will be permitted.**

### **Special Instructions:**

All tools are provided by the host school. If desired, candidates may provide their own tools and electrical meters. Recovery unit supplied by the host school will be a Robinair model # 1780025 Electrical meters are UEI digital multimeters and UEI analog multimeters.