



HVACR COMPETITION
2021 State Fair
 Updated 8/16/2021

DATE: Tuesday, September 28, 2021

TIME: 10:00 a.m. Registration
 11:00 a.m. Contest
 3:00 p.m. Awards

PLACE: State Fairgrounds at The Meadows in Doswell, VA, Caroline County

SCOPE OF THE COMPETITION: The time allotted is 12 minutes per station, with a three minute break/rotation. All teams from the same school will be competing together at the same time. Judges lunch break at approximately 12:00 p.m.

The stations will be as follows:

- Station 1 – Identify Refrigeration System Components
- Station 2 – “Troubleshooting” - A/C Window unit
- Station 3 – Refrigeration System Servicing - Practical and Q&A.
- Station 4 – “Troubleshooting” - Refrigeration System
- Station 5 – “Troubleshooting” - Split System
- Station 6 - Teamwork Copper Project (see ** below)**

JUDGING CRITERIA: * for stations 2, 4 & 5

Items Evaluated	Possible Points
Did contestants wear safety glasses?	10
Did contestants work safely?	10
Did contestants use tools and test equipment properly?	15
Did contestants locate problems correctly?	25
Did contestants explain findings/procedures to judge properly?	25
Did contestants work as a team (teamwork)?	15
TOTAL POINTS	100

**** Station 6-Copper Project –**

Judging Criteria: Accuracy, Appearance, Leak Test and TEAMWORK=10 Points each
 (Total points= 40)

Allotted Time = 15 Minutes

(AGAIN THIS YEAR) Practice Flaring and Swaging before the contest.**

Using 3/8” and 1/2” soft copper tubing

Practice materials will not be provided.

TOOLS AND MATERIALS REQUIRED BY CONTESTANTS:

- Safety Glasses with side shields for each contestant
- Leather Gloves
- Two (2) Digital Thermometers
- Compound Manifold Gauge Set with low-loss hoses
- Volt-Amp-Ohm (Multimeter)

Tool Box including Basic Hand Tools:

- 1 - #2 Phillips screwdriver
- 1 - Straight blade screwdriver
- 1 - 1/4" nutdriver
- 1 - 5/16" nutdriver
- 1 - 8" adjustable wrench
- 1 - Slip joint pliers
- 1 - needle-nose pliers
- 1 - channel-lock pliers
- 1 - Linesman's side cutting pliers
- 1 - Flashlight
- 1 - Refrigeration reversible ratchet wrench
- 1 - Allen wrench set

** Copper Project Tools:

- 2 - tubing cutters
- 2 - deburring/reamer tools
- 2 - measuring tapes/rulers
- 2 - Sharpie markers

(** AGAIN THIS YEAR) 2 - Flaring and Swaging Kits

TOOL DROP OFF: Tools boxes maybe dropped off near the contest site.

DEBRIEFING: To take place directly after the conclusion of the contest. Judges at each event station will provide contest information to teams dealing with items including; troubleshooting problems, technical tips, advise, concerns and positive feed back.

AWARDS: Awards will be presented at the Contest Area.

NUMBER OF CONTESTANTS: Each school can enter up to three (3) - teams of two. Max of 18 teams for this event.

SAFETY FORM: Each contestant must turn in a signed SkillsUSA Virginia Safety Form to the competition chairman on the day of the competition. Each contestant is responsible for bringing the proper PPE to wear while participation in the contest.

DEADLINE: Schools must register the number of teams by September 20, 2021. Contestant names must be submitted to the State SkillsUSA Specialist by September 20, 2021. Substitutions may be made the day of the competition.

ENTRY FEE: \$40.00 per team entering the competition.(\$20 per contestant) Please register on-line at www.skillsusava.org, go to Event, State Fair and then to Competitions.

- *Participants must have a Student Competition Ticket to enter the Fairgrounds unless they are already at the Fair for another competition.*
- *Teachers are responsible for ordering tickets online directly from the State Fair Ticket Office using a State Fair Student Competition Ticket Order Form, which can be found on-line at www.skillsusava.org under 'State Fair'*
- *State Fair tickets must be ordered online so that everyone may enter near contest site. (Gate 2) You will be allowed to park with advance tickets. No picking up tickets on site.*

Safety Form for Tools and Materials
State Fair SkillsUSA Virginia- HVACR Competition



The SkillsUSA Virginia HVACR Competition will involve the use of a power tools, equipment and materials in completing the task within the competition. It is absolutely necessary that complete operating instructions and safety for the use of power tools, equipment and materials have been given to the contestant in his/her training program in the local school division as stated in the National SkillsUSA Standards before he competes. This includes the proper safety instruction in the use of the tools listed in the scope of the contest and the use of protective equipment while using the tools and materials. Safety glasses are required.

By the affixing of my signature below, I certify that my student, who is entering the HVACR Competition at the State Fair, has had proper operating and safety instruction in the use of the power tools, equipment and materials.

(Instructor/Advisor Signature)

(SkillsUSA Virginia Chapter)

By the affixing of my signature below, I certify that I have used the power tools, equipment and materials to be used in the State Fair HVACR Competition and that I understand the correct operating procedures and safety precautions for the use of this power tool, equipment and materials.

(Student Signature)

(Date)

THIS FORM MUST BE SIGNED AND TURNED IN TO THE COMPETITION CHAIRMAN ON THE DAY OF THE COMPETITION. FAILURE TO TURN IN THIS FORM WILL RESULT IN THE STUDENT NOT BEING ALLOWED TO COMPETE.