Welcome Mechatronics competitors and advisors!

This is the latest information we have as of this 4/1/21 update:

The competition will be held on Tuesday, June 15, 2021. Time is TBD, please check the SkillsUSA Update Page. Times will also be posted in the Championships Hub on or after June 1.

There will be an Orientation Meeting held by Friday, June 11, 2021. This will be to allow the students to obtain licenses of the simulation software and have a day or so for familiarization. Further information can be found on the SkillsUSA Update Page.

There will be some slight variation from the Technical Description, which was written for an in-person competition at a central location.

1. Competitors need to provide the following tools:
   Wire Cutters and strippers
   Screwdrivers (flat and Phillips; various sizes)
   Assorted wrenches and pliers.

2. Competitors need to provide the following parts/components:
   24V DC power supply
   Hookup wire (or banana jacks)
   2x PB switches (NO)
   1x PB switches (NC)
   2x limit switches
   3x relays
   Air supply
   Appropriate tubing
   single acting cylinder
   2x double acting cylinders
   4x one-way flow control valves
   2x 3/2 solenoid actuated spring return NNP (normally closed)
   2x 5/2 single solenoid valves
   2x 5/2 double solenoid valves
   Pressure sensor

The contest will probably be made up of these parts:

1. Resume submission. This will need to be done before June 7, 2021, per SkillsUSA. Details will be posted.
2. A written portion. This will be an on-line subject matter test. Details will follow.
3. A simulation portion. Virtual components will be provided and it will be the student's task to develop, test and troubleshoot a virtual circuit per the narrative.
4. A virtual troubleshooting portion, where a circuit will be presented and students need to find and correct the problem(s) to make the circuit function. These files will be emailed or provided to competitors in the Championships Hub on the date of the contest.
5. A hardware portion. This will be level-dependent. Contestants are required to supply
this equipment via their school or program.

1. POST-SECONDARY: You will need to provide your own PLCs, programming software and computers. Hardware and cables will be specified and arrangements may be made to provide equipment. Details to follow.

2. HIGH SCHOOL: A list of generic fluid power hardware will be provided and posted (components from Festo TP201 or equivalent). Details to follow.

Please check back frequently for updates as the Mechatronics contest will evolve.