**AST Contest Information**

Dress Code:

Although, WV does not require SkillsUSA branded uniforms for the competition we do expect competitors to report in appropriate automotive professional attire. A button-up work shirt, work pants, and work boots are required.

* A button-up, collared work shirt – The shirt does not have to have pockets, can be any color, and must be tucked in.
* Work pants – Work pants can be any color or jeans can be worn, but they may not be ripped or stained.
* Leather work boots – Leather work boots must have non-slip soles, can be brown, tan, or black and must cover the ankle. Work boots do not need to have steel/composite toes. Cowboy boots that do not have a non-slip sole are not allowed.

All clothing should be stain free and laundered. A hat may be worn, baseball style only (no cowboy hats). Belts are optional. The buckle must be rotated to the side so that it does not scratch any vehicles. For safety reasons, no jewelry will be permitted (earrings, bracelets, necklaces, rings, etc.). If the competitor has a religious medallion on a necklace, that is required to be worn, they may tape it to their chest or pin it to the inside of their shirt so that it does not dangle outside of their shirt. Medical alert bracelets are permitted. At reporting time, competitors will be lined up and evaluated. Anyone who has deficiencies in these areas during the line-up will be deducted points. Anyone who reports to the competition without safety glasses will be deducted points. Anyone who shows up with their contestant number on their badge not showing will be deducted points. As their advisor it is your responsibility to make sure they are prepared for the competition. If you have any questions, please email myself or Lee Drake.

The Competition:

This contest is used to find the candidate to represent the state of WV at the National SkillsUSA Leadership and Skills Conference so these participants should be at the top of their game. In order to make the experience a positive one for all of those involved we would like to ensure that your participant has certain basic skills that will help them be more prepared for the contest this year. The competition will consist of 7 stations and a 50 question automotive knowledge written test. Skills that should be practiced include but are not limited to the following:

Brakes

* Identify hydraulic and electronic brake (disc and drum) system components and their functions
* Perform a disc brake job
* Use precision measuring tools to measure brake components and compare measurements to vehicle manufacturers specifications
* Describe ABS, TCS, and ESC systems, their components and functions.

Steering and Suspension

* Identify steering and suspension components and their functions
* Perform a pre-alignment inspection
* Identify alignment angles and how to adjust them
* Inspect tires and tire wear

Engine Repair

* Identify engine block and cylinder head components
* Measure engine components using precision measuring tools (micrometer, digital caliper, feeler gauge, straight edge, dial indicator, dial bore gauge, telescoping gauge, small hole gauge, etc.)
* Identify timing components and understand mechanical timing

Engine Performance

* Use a scan tool to read engine data and retrieve DTCs
* Understand engine performance sensors involving ignition, fuel management, intake & exhaust, and emissions
* Read engine performance wiring diagrams
* Utilize Service Information for diagnostic procedures and information

Electrical

* Understand series, parallel, and series-parallel circuits
* Build a circuit
* Read a basic wiring diagram and apply it to a real circuit
* Use test light
* Use a DMM to measure voltage, resistance, continuity, and current

Other Skills

* Use of ShopKeys Service Information
* Identify various automotive electrical and mechanical components
* Think Safety, Safety, Safety
* Display professionalism and a positive attitude

Tools and Equipment Provided:

* Hunter HawkEye Elite Alignment Machine
* Snap-On Verus Edge
* Snap-On 504D/504F Digital Multimeter
* Computer with ShopKeys
* Atech 5810TT Troubleshooting Trainer
* Test light

Tools to Bring (Optional)

* Scan tool updated to 2022
* Digital Multimeter
* Test light
* Safety Glasses (required)