



**Pennsylvania - District 2**  
*Education . . . with a competitive side*

## **AUTOMOTIVE MAINTENANCE AND LIGHT REPAIR**



### **Clothing Requirements**

Official SkillsUSA light blue work shirt and navy pants, black or brown 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.)

*Note:* At the district level if a student is not able to wear the official SkillsUSA attire he/she may wear an outfit that would be acceptable in their specific field of study. *Please keep in mind that official SkillsUSA attire will be required at the state and national level.*

### **Eligibility**

Open to active SkillsUSA members enrolled in career and technical programs with automotive technician or automotive service technology as the occupational objective.

### **Equipment and Materials: Supplied by host school:**

1. ShopKey Pro
2. All required hand tools
3. Engine coolant testing equipment (Hydrometer, Refractometer, pH Test Strips)
4. Hunter TCx51, TCx53 tire machine
5. Hunter Road force Elite wheel balancer
6. Brake measuring equipment
7. Dial indicator and micrometer
8. KD3377 brake drum measuring tool
9. Hunter LY51-18K 4 POST 2 swing jacks

### **Equipment and Materials: Supplied by contestant:**

1. All students must have a one-page, typewritten résumé
2. Safety glasses
3. Work boots (No Sneakers)

### **Scope of the Contest – (Defined by the State Competition Regulations)**

*(District Competitions are meant to be a scaled down version of State Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels)*

To promote trade and excellence in a competitive situation and give automotive mechanic students an opportunity to demonstrated skills performed by a service manager/writer.

### **Knowledge Performance**

The contest will include a written knowledge test.

### **Skill Performance**

The contest will include the research of vehicle service information and technical bulletins. This information gathering simulates a situation that a technician will encounter during the course of a normal day. In addition, competitors will need to demonstrate the ability to measure and evaluate engine coolant, service and identify a tire and wheel assembly. Finally, the competitors will demonstrate their ability to inspect and measure brake system components and ball joints.

### **Safety Requirements**

1. Safety glasses and specific clothing requirements that are defined in Clothing Requirements.

### **Contest Guidelines**

The contest will test the student's ability to perform the following skill set.

1. Knowledge of MLR ASE areas
2. Locate Service Information
3. Demonstration knowledge of under hood engine maintenance
4. Demonstration knowledge of brake systems
5. Demonstration knowledge of steering and suspension systems

### **Contestants will be judged on:**

<b>Component Description</b>	<b>Total</b>	<b>Earned</b>
<b>ASE Knowledge Performance Test</b>	<b>100</b>	
Complete 25 ASE Maintenance and Light Repair test questions.		
<b>Workstation A – Service Information</b>	<b>40</b>	
Research applicable vehicle service information and technical bulletins.		
<b>Workstation B – Engine Coolant Testing</b>	<b>40</b>	
Check coolant condition and concentration.		
<b>Workstation C – Tire Service</b>	<b>60</b>	
Dismount, inspect, and remount tire on wheel		
Balance wheel and tire assembly (dynamic).		
Tire Measurements and Tire Inspection and Identification		
<b>Workstation D – Brakes</b>	<b>40</b>	
Measure drum diameter		
Brake Measurements and Inspection		
<b>Workstation E – Steering and Suspension</b>	<b>40</b>	
Inspect and Measure Ball Joint		
<b>Total</b>	<b>320</b>	

*Notes: Judges may use their own discretion to assign points between the numerical values listed above in order to more accurately grade contestant performances. Note: No cell phones or other electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.*