



NYS SkillsUSA Standards



AUTOMOTIVE VEHICLE MAINTENANCE BASIC



PURPOSE

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of basic vehicle maintenance.

ELIGIBILITY

Open to active SkillsUSA members enrolled in programs with entry-level job skills as the occupational objective. The Basic Participation Form, of SkillsUSA New York will be the appropriate form to be used for all New York State basic contests. The form states that the contestant is classified under the provisions of Public Law 105-17, Individuals with Disabilities Education Act, 1997. Since NYS does have restrictions on the release of this information, this form, with the required signatures will allow the student to compete. The Basic Participation Form is to be presented to the contest chair at the contestant orientation meeting.

No written Contest Test and no SkillsUSA knowledge (PDP) test is required.

CLOTHING REQUIREMENT

NYS SkillsUSA – Mechanic

- White crew neck short- sleeved T-shirt
- Work pants or jeans,
- Leather or steel toed work shoes.
- Long hair must be restrained.
- Safety glasses with side shields or goggles, (Prescription glasses can be used only if they are equipped with side shields and approved by OSHA(Z-87). If not, they must be covered with goggles.)

Note: Contestants must wear their official contest clothing to the contest orientation meeting.
Also bring #2 pencil, resume, Conference Program, basic form, and safety assurance form.

EQUIPMENT AND MATERIALS

Supplied by the NYS chair/committee:

- All support equipment and contest supplies.
- All information necessary for the contestant and judges

Supplied by the contestant:

- 3x5 – index card with name of contest, contestants name, home address, name of CTE center advisor/chaperone, and their cell phone number.
- **All competitors must create a one-page résumé and submit a hard copy at orientation. Failure to do so will result in a 10-point penalty.**
- **“Note: Your resume may be judged as part of your contest”**

DEVICES

Cell phones or other electronic devices not approved by the NYS Chairperson will be collected by the contest chair during the competition. Chairpersons will announce their acceptance by listing it on their standard or at the orientation meeting. In case of emergencies advisors should allow the competitors to take their phones to the contest areas.

If the competitor uses their device in a manner which compromises the integrity of the competition, the competitor’s score may be penalized.

SCOPE OF THE COMPETITION

Knowledge Performance

No knowledge part or written exam to this contest

Skills Performance

Contestants will demonstrate their ability to perform tasks selected from the following list of competencies (while adhering to all safety rules):

- Remove and replace spark plugs and set the gap to manufacturer specifications.
- Demonstrate under hood checks such as fluid levels, belts, hoses and coolant protection levels.
- Perform a safety inspection and explain repair of faulty items, aim headlights, check air pressure in tires and tire tread depth.
- Identify the main parts of the drum and disk brakes and ABS components.
- Demonstrate correct method to disassemble and reassemble brakes.
- Demonstrate correct procedure for installing spark plug wires to manufacturer specifications.
- Identify the main parts of a tire and wheel.
- Demonstrate correct use of a tire machine.
- Remove, balance and replace a tire.
- Identify tools of the trade (including measuring instruments)
- Demonstrate and use a multi-meter for testing and, or diagnostic problems of electrical systems.
- Construct an electrical circuit from supplied material and a wiring diagram.
- Identify parts of a drive line and explain how to time a drive line.
- Explain and identify parts of a differential. Be able to disassemble/assemble a differential.
- Identify and measure parts of the camshaft or crankshaft.
- Identify parts of a clutch and explain the workings of the clutch.
- Demonstrate and be able to measure with micrometers (inside & outside).
- Identify planetary gears and explain how the gear works.
- Identify grade and thread of SAE and Metric bolts.
- Demonstrate how to properly jack a vehicle and change a tire.
- Job interview skills