LEVEL UP
2026 - 2027

NYS SkillsUSA



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 emailed to Angel Mead at amead@nysskillsusa.org. by April 1, 2027. The form can be found on the nysskillsusa.org website under forms. The NYS Skills PDT test will be given at orientation.

CLOTHING REQUIREMENTS

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, contestant's 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 competitors to take their phones to the contest areas.

If the competitor uses their device in a manner that 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 for 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 the correct procedure for installing spark plug wires to manufacturer specifications.
- Demonstrate under-hood checks such as fluid levels, belts, hoses, and coolant protection levels.
- Perform a safety inspection and explain the repair of faulty items, check tire pressure, and tread depth.
- Identify the main parts of the drum and disk brakes and ABS components.
- Demonstrate the correct method to disassemble and reassemble disc and drum brakes.
    - Remove, inspect, and install brake shoes, springs, pins, clips, levers, adjusters, and other brake hardware
    - Remove, inspect, and install caliper, pads, and related hardware; measure brake pad wear; check wear indicators; determine necessary action
    - Clean and inspect rotor, measure thickness, thickness variation, and lateral runout; determine necessary action
- 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 the correct use of a multi-meter for testing and diagnosing problems of electrical systems.
- Construct an electrical circuit from supplied material and a wiring diagram.
- Demonstrate the use of a scan tool to retrieve trouble codes and or data.
- Identify parts of a drive line.
- Identify parts of a clutch and explain the workings of the clutch.
- Demonstrate and be able to measure with micrometers (inside & outside).
- Identify grade and thread of SAE and Metric bolts.
- Demonstrate how to jack a vehicle and change a tire properly.
- Demonstrate the use of service information systems, such as but not limited to Alldata, to locate repair information.
- Job interview skills: Conduct a mock job interview with appropriate professional behavior. Communicate clearly and effectively. Fill out a job application completely and accurately.