LEVEL UP 2026 - 2027

NYS SkillsUSA

MOTORCYCLE SERVICE TECHNOLOGY

PURPOSE

To evaluate each competitor's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of motorcycle service technology.

ELIGIBILITY

Open to active SkillsUSA members enrolled in career and technical programs that include motorcycle service technology as an occupational objective.

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, and safety assurance form.

EQUIPMENT AND MATERIALS

1. Supplied by the technical committee:
   a. All necessary tools, equipment, supplies, and publications for the competition
2. Supplied by the competitor:
   a. All competitors must create a one-page resume. See "Resume Requirement" below for guidelines.

RESUME REQUIREMENT

Competitors must create a one-page resume to submit at orientation.

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

The competition is divided into two parts: a written exam and series of skill-related tests designed to assess skills selected from the following lists of competencies as determined by the SkillsUSA Championships technical committee.

KNOWLEDGE PERFORMANCE

All competitors are required to take the SkillsUSA professional development test at orientation.

The competition will include a written exam assessing knowledge of motorcycle service competencies.

SKILLPERFORMANCE

The competition will include a series of tests designed to assess skills identified by industry standards in the areas of accuracy, proper use of tools and equipment and safety practices.

COMPETITION GUIDELINES

1. Competitors will be tested on a variety of motorcycles, ATVs, scooters, and Side-by-Sides commonly found in the United States using both metric and American threads/wrenches.
2. Competitors will be judged on accuracy, proper use of tools and equipment and safety practices. Rating sheets will reflect each specific skill requirement as determined by the national technical committee.

STANDARDS AND COMPETENCIES

MST 1.0 — Implement skills and apply knowledge needed to perform general shop procedures

1.1. Use the parts manual to identify part numbers of specified parts
1.2. Apply the knowledge needed to use and read service manuals to find specifications and procedures
1.3. Apply the knowledge to use proper techniques in the care and use of equipment
1.4. Demonstrate proper safety procedures
1.5. Fill out repair orders

MST 2.0 — Apply the knowledge and skills needed to test the performance of engine/drivetrain condition in a motorcycle service situation

2.1. Determine engine condition by performing a cylinder leak down and compression test
2.2. Use dial bore gauges, micrometer, and feeler gauges to determine the condition of cylinders, pistons, rings, and other engine parts
2.3. Remove, measure, and reinstall clutch components
2.4. Adjust valve clearance of screw-type and shim- (pad) type valves
2.5. Diagnose, service and repair chain and sprocket and/or shaft-driven and/or belt type final drive systems
2.6. Identify and inspect transmission components

MST 3.0 — Implement the skills and knowledge needed to run a carburetion and fuel injection inspection in a motorcycle service situation

3.1. Remove and disassemble carburetor, adjust the float, identify components, and reassemble and reinstall carburetor
3.2. Remove and disassemble intake runner, identify components, reassemble, and reinstall
3.3. Inspect, service and reinstall an oil-foam air filter
3.4. Synchronize carburetors
3.5. Reflash ECM/BCM

MST 4.0 — Apply the knowledge needed and the skills required to inspect, repair and service wheels in a motorcycle service situation

4.1. Inspect, repair and service tubeless tires (street and ATV type)
4.2. Inspect, repair and service tube tires
4.3. Diagnose, service and repair disc and drum brake systems

4.4. Measure radial and lateral run out of a rim using a dial indicator true spoke wheel
4.5. Static balance the wheel

MST 5.0 — Demonstrate the skills needed to perform a routine inspection and maintenance check in a motorcycle service situation

5.1. Inspect, service and replace cables
5.2. Inspect, service and reinstall crankcase breather
5.3. Inspect fluid levels
5.4. Adjust ignition timing
5.5. Adjust clutch mechanisms and cable

MST6.0— Apply the knowledge and the skills needed to perform an electrical inspection in a motorcycle service situation

6.1. Use a multimeter to measure and diagnose resistance of specified components, amperage drain key off and on, battery voltage key off and key on, charging voltage and amperage
6.2. Locate and repair other electrical problems
6.3. Inspect the ignition timing