



## 2020 State Contest

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### MOTORCYCLE SERVICE

#### Description

Contestants perform tasks representative of those encountered in a dealership's service department. Technical skills include performing scheduled maintenance tasks; use of service, electrical diagnostic and parts manuals; electrical diagnostics; precision measurement; brake service; chassis/suspension service; fuel delivery system inspection and repair; transmission and drive systems; powertrain systems

Judges will look for organized work habits, and correct use of reference materials. The ability to follow directions and good technical skills.

**Note:** Please check the SkillsUSA National website for updated contest information and the SkillsUSA National Technical Standards <http://updates.skillsusa.org>

#### Eligibility

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

#### Clothing Requirements

Class D: Contest Specific — Blue Attire

- Official SkillsUSA light blue work shirt
- Navy pants
- Black, brown or tan leather work safety shoes (with protective toe cap)
- These regulations refer to clothing items that are pictured and described at: [www.skillsusastore.org](http://www.skillsusastore.org).
- If you have questions about clothing or other logo items, call 800-401-1560 or 703-956-3723.
- Contestants must wear their official contest clothing to the contest orientation meeting.

#### [Clothing Classifications](#)

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### **Knowledge Performance**

The contest will include a written knowledge exam assessing knowledge of industry standards and competencies as identified by the technical committee.

### **Skill Performance**

The contest 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.

### **Contest Guidelines**

1. Contestants may be tested on a variety of motorcycles, ATVs, and scooters commonly found in the United States using both metric and American threads/wrenches.
2. Contestants 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.

### **Safety**

Students should be aware of and practice standard shop safety during all exercises. Safety glasses are required unless Station Judges advise otherwise. Station judges will monitor safety practices and inform students if safety is compromised. Scoring will be affected by safety practices.

### **Conduct**

1. Professional conduct is expected at all times during the competition and lunch break.
2. All contestants will remain in the contest area during the competition and lunch break and must ask for permission to leave the area for any reason.
3. Compliance with the Station Judge directions during the competition is required.
4. Students must refrain from using cell phones and conversing with other students, instructors or spectators during the competition and lunch; violators will be subject to disqualification.

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5. Students must wear their contest identification badge at all times.

### Competition Stations

1. **Written Test** - Contestants will be tested through a multiple-choice exam covering motorcycle systems including fuel induction, 2 and 4 stroke engine theory, power delivery, suspension, frame geometry, and electrical systems.
2. **Precision Measurement** - A hands-on and written station where contestants will be tested on their ability to correctly use precision measuring tools to measure various engine components to calculate clearances in order to determine necessary repairs. Equipment: Standard and metric micrometers, Vernier caliper, feeler gauge, dial bore gauge and/or telescoping gauge.
3. **Pre-delivery Inspection** - A hands-on and written station where contestants will complete a pre-delivery inspection checklist on a late model Yamaha motorcycle verifying proper condition prior to delivery.
4. **Tool Identification** - A written and identification station where contestants will be tested in their ability to properly identify motorcycle specific tools related to the engine, suspension, chassis, electrical, and brake service.
5. **Electrical; Starting and Charging Systems** - A written and hands-on station where contestants will be tested in their knowledge of the operation and repair of motorcycle charging and starting systems as well as their ability to diagnose and advise necessary repairs in a starting system on a late model Harley Davidson motorcycle. Equipment: Late model Harley Davidson motorcycle, service manual, Blue Point DVOM.
6. **Service Manual** - A written station where contestants will be tested in their ability to navigate through various service manuals to find specifications and service procedures.
  - a. Equipment: Kawasaki, Yamaha, Honda, and Harley Davidson service manuals.
7. **Fuel Induction** - A written and identification station where contestants will be tested in their knowledge of Electronic Fuel Injection system components and their operation. Contestants will also be tested in their knowledge of carburetion theory and identification of carburetor design and components.

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8. **Valve Clearance Adjustment** - A hands-on and written station where contestants will be tested in their knowledge of modern motorcycle valve train design, operation, and components as well as their ability to properly perform valve clearance adjustment. Equipment: Polaris cylinder head assembly, service manual.
9. **Parts Identification** - A written and identification station where contestants will be tested in their knowledge of motorcycle parts and ability to correctly identify them. Parts will be taken from engine components, suspension assemblies, power delivery systems, and fuel induction assemblies.
10. **Compression Test** - A hands-on and written station where contestants will be tested in their knowledge of engine compression and the engine components which affect engine compression. Contestants will also be tested in their ability to properly perform a cranking compression test on a late model Kawasaki motorcycle. Equipment: Late model Kawasaki motorcycle, service manual, motorcycle compression tester.

### **Equipment and Materials Supplied by contestants**

1. Portfolio
2. Safety Glasses
3. Pen & pencil

### **Equipment and Materials Supplied by SkillsUSA California**

Late-model Yamaha motorcycle, service manual, various hand tools.

### **Friday: Time and Room TBD**

1. Roll-call for all students
2. overview of the competition activities
3. Written Test
4. Collection of portfolios

### **Saturday - 7:30 am**

1. The competition will begin at 7:30 AM and conclude around 2.00 PM.

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2. Orientation will be in the competition area.
3. Each station is allocated 20 minutes of time.
4. A 30-minute lunch break will be scheduled around 12:00 PM.
5. Lunch will be provided and all contestants will be required to stay in the competition area during lunch.
6. Group debriefing for students and judges immediately following the contest.
7. Student scores will be compiled on Saturday afternoon and provided to the convention management for announcements during the Sunday Award Ceremonies.

### Recommendations

1. If you do not understand any instructions or have any problems during the contest, ask the Judge or contact the Competition Administrators for help.  
**Problems that are not brought to the attention of the staff during the competition cannot be resolved after the competition.**
2. Be sure to read and follow the instructions carefully. Have a strategy of when to do any written general knowledge questions, to maximize your score.
3. After completing each exercise remember to return the equipment and tools to their original position to avoid losing points.