



## Power Equipment Technology 2023 Tool List and Scope of the Contest

All contestants report to Contest Site in **Pinnacle Bank Expo Center**, for the orientation and written exam, on Thursday 4-13-23 at 7:00 pm dressed in your SkillsUSA official dress. Contestant must have: pencil, calculator, and Safety Glasses.

### Clothing Requirement:

For 2023 contest we would prefer contestants wear SkillsUSA official dress: Short sleeved blue shirt, blue slacks, black or brown shoes, and black belt. You may wear SkillsUSA Nebraska T-shirt or nice shirt with blue jeans.

**All contestants must submit your Resume via email address to: [wcbwbcross@gmail.com](mailto:wcbwbcross@gmail.com) by 4-5-23.**

### Tools:

The following list consists of some special tools you may want to become familiar with for the contest. You will find that most small engine shops will have most of these tools. Find a reputable small engine shop in your community and ask the technician if he/she would be willing to show them to you and maybe even give you a short lesson on how to use them.

-Spark Tester	-valve repair tools	-Digital Calculator	-Vernier Caliper
-Digital Tach	-VOM digital multimeter	-1/10000 Outside Micrometer	-Machinist Rule

### Scope of the Contest

- Know 2-cycle and 4-cycle theory of operation and how the engine functions.
- Be familiar with the various operating systems on small engines and know how to diagnose problems with these systems, such as the fuel, electrical, power train, and the ignition system.
- Have good customer relation's skills. How to greet the customer and know how to process a **work order** using excel, customer's personal information, equipment information, and look up parts/costs to complete a work order.  
Know how to use a computer to look up parts. Use [www.partstree.com](http://www.partstree.com) web site to become familiar with this valuable tool for technicians.
- Know how to perform precise measurements with vernier micrometer and dial indicator, ( + or - .001 ) accuracy.
- You will be required to diagnose a failed engine. Find some type of guide to study failed engines and or parts. It does not matter whose guide you study. Engines fail from the same problems.
- Know how to diagnose a poor running 4-cycle L-head or OHV engine in single or twin cylinders. Troubleshooting, repair, adjustment of engine valves. It doesn't matter what brand of engine, they all have the same major parts even if they are not interchangeable from manufacturer to manufacturer.

[https://www.briggsandstratton.com/eu/en\\_gb/support/faqs/browse/valve-repair-maintenance.html](https://www.briggsandstratton.com/eu/en_gb/support/faqs/browse/valve-repair-maintenance.html)

- A pen or pencil is required for contest.
- All the specialty tools will be provided on station.
- Know how to read technical repair manual instructions to perform activity.
- Know how to use a digital multi-meter to measure and diagnose electrical problems, example the **Fluke 73 III** or other VOM will be used.
- Know how to service and repair landscape tools, mowers, chainsaw, trimmers, blowers, etc.
- Know how the **Kohler EFI fuel system** operates, today's small engine manufacturers are using EFI fuel systems for greater fuel economy and performance as well as battery power operation. Power Portal is a great site for all advisors.

<https://www.thepowerportal.com/Login.htm?Login=1&returnurl=%2fnA%2fEnglish%2fBriggsStratton.htm>