Power Equipment Technology

**9A**

Area #1 Regionals March 4, 2025

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Standards will follow State standards as closely as possible to get competitors ready for State competition

**Equipment and material**

* Number 2 pencil
* All other tools and supplies provided by contestant chair

**Scope of competition**

* Two and four stroke engines of various designs, single and multi-cylinder
* Mechanical and hydraulic systems, drivetrain, steering, braking, and PTO systems
* Electrical systems, starting, charging, lighting and safety

**Clothing requirement**s

* White crew neck T-shirt
* Work pants or jeans
* Leather boots
* Long hair must be tied back
* Z87 approved safety glasses prescription glasses approved for Z87 standards or goggles or safety glasses should be worn over.

**Knowledge performance**

* Students will be required to complete a written exam based on industry standards. This test may cover engine or equipment diagnostics, failure analysis, parts ID, ordering or related equip**ment, or any other item pertaining to the industry.**

**Skills performance**

* The competition will include a series of power equipment technology testing stations to assess skill performance.

**Areas of focus are as follows**

1. Parts ID

* + Engine crank case
  + Pistons
  + Cam
  + Valve
  + Head
  + Carburetor / Fuel Injection
  + Exhaust
  + Governor
  + Gaskets
  + Spark plugs
  + Electrical Components

ANY OTHER PARTS PERTAINING TO SMALL ENINGE REPAIR

2. Trouble shooting and diagnostic Power Equipment.

* + Basic Electrical and Fuel systems / EFI
  + Process of elimination.
  + Basic Knowledge of Power Equipment
  + Customer Service

ANY OTHER PARTS PERTAINING TO SMALL ENINGE REPAIR

3. Measuring with the Mics/ Feeler gauges

* + Pistons / Valves
  + Crank
  + Cylinder bore

ANY OTHER PARTS PERTAINING TO SMALL ENINGE REPAIR

4.      Disassemble, reassemble and torque all parts using the service manual

5.  Spec. lookup in service manual

* Spark plug gap
* Head bolt torque
* Crank case torque
* Piston size
* Cylinder size
* Oil capacity
* Maintenance schedules

ANY OTHER PARTS PERTAINING TO SMALL ENINGE REPAIR

6. Two, and 4-Cycle Service and Troubleshooting. May be any of the following.

* Chainsaw
* Mower
* Motorcycle
* Tiller

ANY OTHER PARTS PERTAINING TO SMALL ENINGE REPAIR