**SMALL ENGINES**

Each county may submit 1 entry total for 50294; and 1 entry for 50297.

Small Engine displays must be no larger than 4’ x 4’ display board. **Exhibits must be portable.** The size of exhibits larger than 3’ x 3’ should be noted on the 4-HDMS electronic entry form. No complete engines, lawn tractors, tillers, chainsaws, etc. are permitted for display. No electrical power is available for displays/exhibits.

**50294 Small Engines:** Exhibit a display, selecting one of the following items:

- **Ignition System:** Identify the parts of the Ignition System and explain how magnetic energy is produced through the ignition system to ignite the spark plug; **OR**
- **Compression System:** Explain how heat energy is produced by an engine and converted into mechanical energy; **OR**
- **Heat Transfer:** Explain how heat is transferred through the cooling and lubrication system of an air cooled or water cooled engine; **OR**
- **Filter Maintenance:** Explain the proper maintenance and cleaning of the air, fuel and oil filters of an engine; **OR**
- **What does a serial number reveal?:** Explain the various information that can be learned from the serial number or identification number stamped on the shroud of a Briggs & Stratton engine; **OR**
- **Tools to do the job:** Identify and explain the function(s) of different specialty tools needed for small engine work, **OR**
- **Experimentation:** Explain through illustration an experiment you conducted from the project manual showing the results of your work.

**50297 Small Engines Ready4Life Challenge:** (Open to 11- to 18-year-olds enrolled in any Small Engines project)

Exhibits in this category must include the following: a) a physical representation of the career or business product such as a model, prototype or display/portfolio that includes images of accomplished work; b) verbal or written explanations that demonstrate knowledge of the related career or business fields, potential careers, and the appropriate requirements for achievement in those fields. The judging criteria for this class values thoroughness of career and/or business exploration and pursuit above the workmanship of the physical specimen on display.