**Agricultural Technology & Mechanical Systems**

**Small Engine Parts Identification Contest Guidelines**

Each contestant must be able to identify the parts of the small engine and be able to give the purpose of each part. The engine parts will be identified on a disassembled engine, not on an assembled engine. The contestant will look at each part and write its name on answer sheet\*. There will be a word bank at the bottom of the test page.

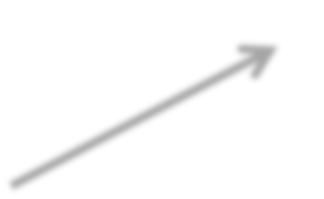
**Engine Parts:**

|  |  |
| --- | --- |
| A. Air Cleaner | K. Exhaust Valve |
| B. Armature | L. Fuel Tank |
| C. Camshaft | M. Flywheel |
| D. Carburetor | N. Flywheel Key |
| E. Combustion Chamber | O. Intake Valve |
| F. Connection Rod | P. Oil Filler Plug |
| G. Crankcase | Q. Piston |
| H. Crankshaft | R, Piston Head |
| I. Cylinder | S. Piston Ring |
| J. Cylinder Block U. Cylinder Head | T. Spark Plug |

Each contestant must work on parts identification independently and without assistance\*. Any outside assistance may disqualify the contestant.

*\* Students who require reading assistance may request to have the parts list read to them.*

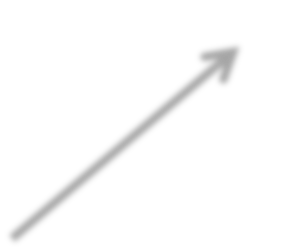
**Photos for parts Identification**



**Air Cleaner:** a device that filters the air that is mixed with the fuel in the engine.



**Camshaft:** the shaft containing lobes or cams which rotate to raise and lower the valves.



**Combustion Chamber:** the volume of the cylinder above the piston with the piston at top dead center.



**Armature:** a part consisting of coils of wire around an iron core that induces an electric current when it is rotated in a magnetic field.



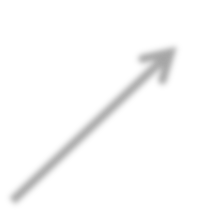
**Carburetor:** a device for automatically mixing fuel in the proper proportion with air to produce a combustible gas.



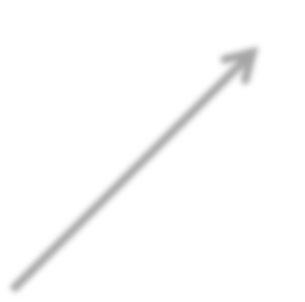
**Connecting Rod:** a rod that connects the piston to the crankshaft.

**Crankcase:**

the housing where the crankshaft



and many other parts of the engine operate.



**Cylinder:** a round hole having some depth bored to receive a piston. Sometimes referred to as a bore or barrel.



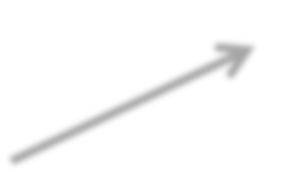
**Cylinder Head:** a detachable portion of an engine fastened securely to the cylinder block that contains all or part of the combustion chamber.



**Crankshaft:** the main shaft of the engine which, in conjunction with the connecting rod, changes the reciprocating motion of the piston into rotary motion.



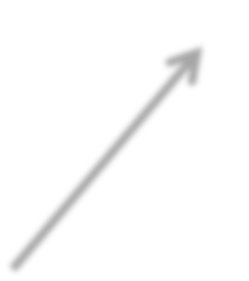
**Cylinder Block:** the largest single part of an engine; the main mass of metal where the cylinders are bored or placed.



**Exhaust Valve:** a valve that permits the remains of the burned fuel to leave the combustion chamber.



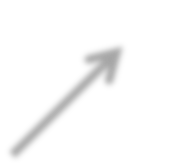
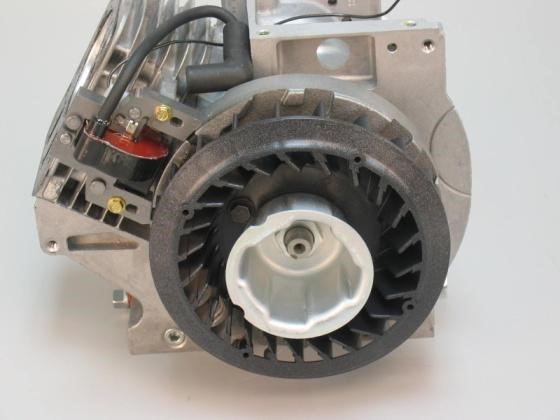
**Fuel Tank:** the device which contains the fuel to be burned in the engine.



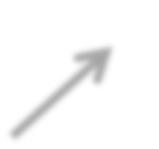
**Flywheel Key:** a device that holds the flywheel in place.



**Oil Filler Plug:** the device that closes the opening where the crankcase is filled with oil.



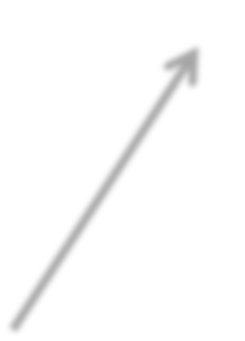
**Flywheel:** a heavy wheel that maintains the speed of the engine while it is running.



**Intake Valve:** a valve that permits the air- fuel mixture to enter the combustion chamber and seals its exit.



**Piston:** a cylindrical part closed at one end that is connected to the crankshaft by the connecting rod.



**Piston Head:** the part of the piston above the rings.



**Spark Plug:** a device inserted into the combustion chamber of an engine that contains an insulated control electrode for conducting current.



**Piston Rings:** expanding rings placed in the grooves of the piston to create a seal that prevents the passage of fluid or gas past the piston.

**Contestant Name and Chapter \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Small Engine Parts Identification**

|  |  |  |  |
| --- | --- | --- | --- |
| Part # | Name (letter only) | Part # | Name (letter only) |
| 1 |  | 6 |  |
| 2 |  | 7 |  |
| 3 |  | 8 |  |
| 4 |  | 9 |  |
| 5 |  | 10 |  |
|  |  | Total |  |

|  |  |
| --- | --- |
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