

# 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     | T. Spark Plug      |
| U. Cylinder Head      |                    |

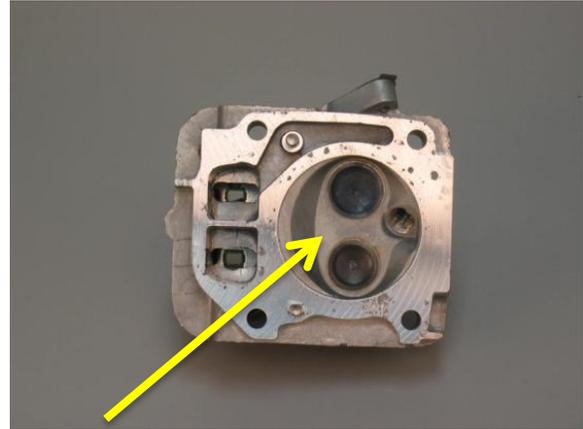
Each contestant must work on parts identification independently and without assistance\*. Any outside assistance may disqualify the contestant.

*\* 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.



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



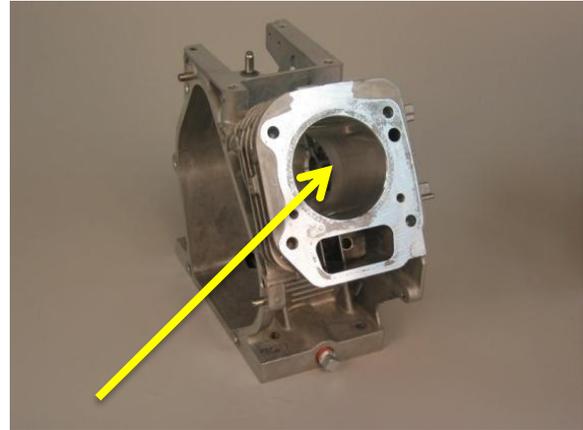
**Camshaft:** the shaft containing lobes or cams which rotate to raise and lower the valves.



**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.



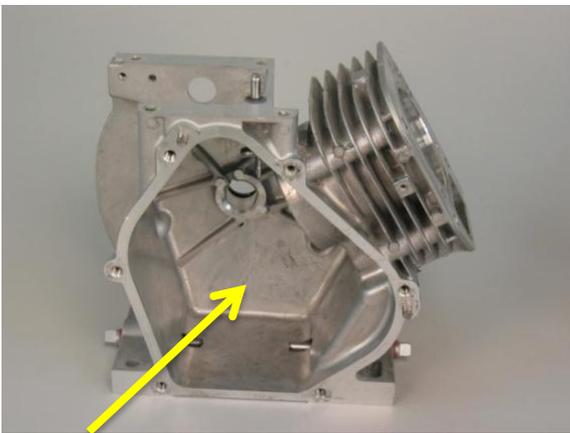
**Cylinder:** a round hole having some depth bored to receive a piston. Sometimes referred to as a bore or barrel.



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



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



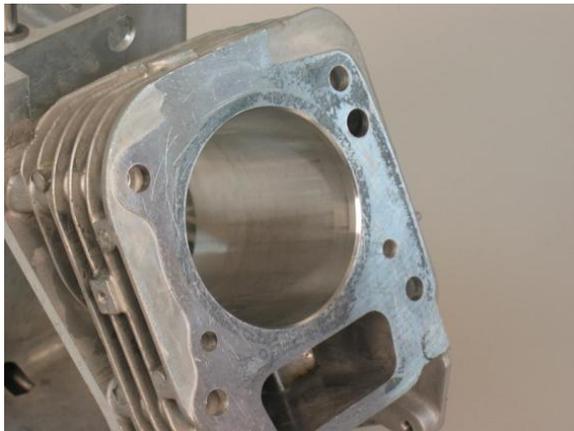
**Crankcase:** the housing where the crankshaft and many other parts of the engine operate.



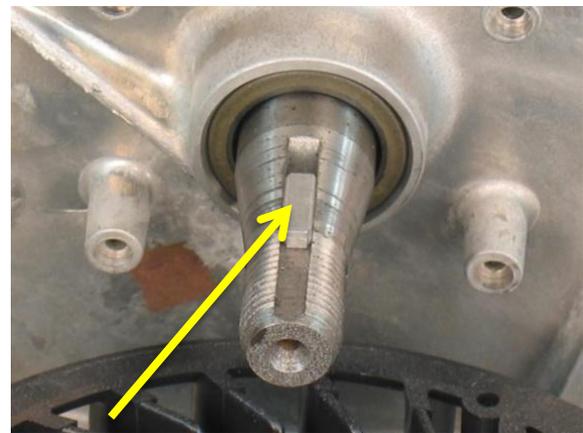
**Crankshaft:** the main shaft of the engine which, in conjunction with the connecting rod, changes the reciprocating motion of the piston into rotary motion.



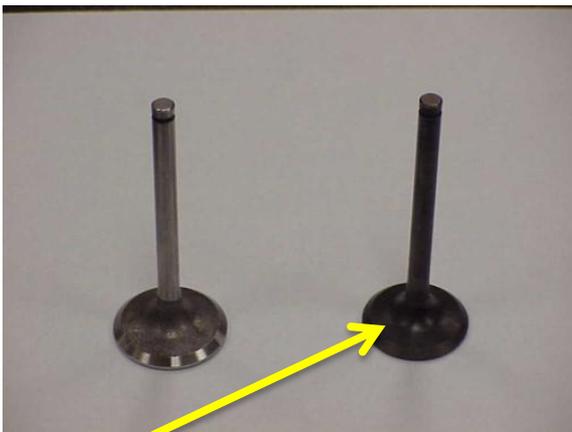
**Fuel Tank:** the device which contains the fuel to be burned in the engine.



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



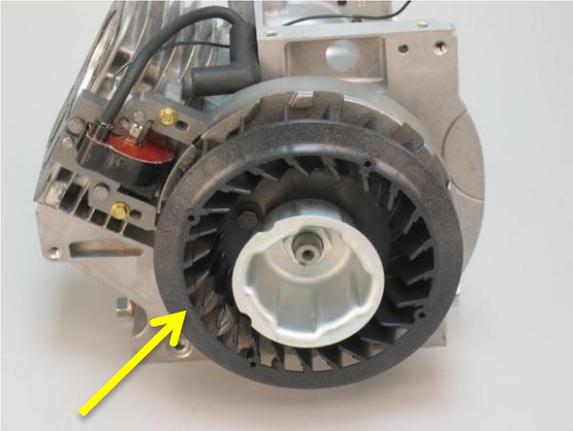
**Flywheel Key:** a device that holds the flywheel in place.



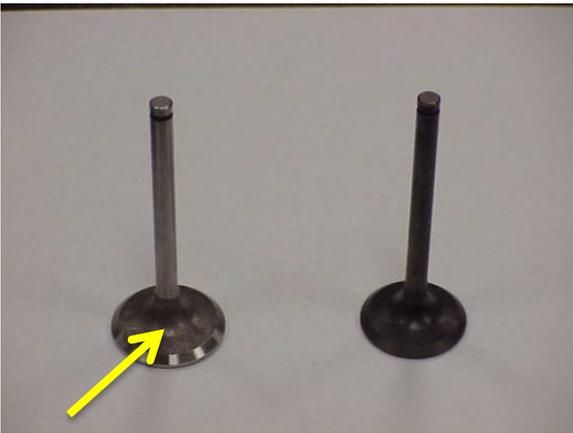
**Exhaust Valve:** a valve that permits the remains of the burned fuel to leave the combustion chamber.



**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	

- A. Air Cleaner
- B. Armature
- C. Camshaft
- D. Carburetor
- E. Combustion Chamber
- F. Connection Rod
- G. Crankcase
- H. Crankshaft
- I. Cylinder
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