

Distinguish, differentiate, compare and explain what is the difference between Two and Four Stroke Engine. Comparison and Differences.

Difference between Two and Four Stroke Engine

1. Two stroke engine have no valves but only ports. The four-stroke consists of valves and valve mechanism.
2. Two-stroke has lower volumetric efficiency because of lesser time for induction. Volumetric efficiency of four-stroke is more due to greater time of induction.
3. Due to light weight, simplicity, and absence of valve mechanism, the initial cost is less in two-stroke while due to heavyweight and complication of the valve mechanism, the initial cost is high in four stroke engine.
4. In first, the cycle is completed in two strokes of the piston or in one revolution of the crank shaft. In second, the cycle is completed in four strokes of the piston or in two revolutions of the crank shaft.
5. In two stroke, more uniform turning movement and hence lighter flywheel s needed. In four stroke the turning movement is not uniform and hence heavier flywheel is needed.
6. For the same power the two-stroke engine is light and compact. For the same power the four-stroke is heavy and bulky.
7. Because of one power stroke in one revolution greater cooling and lubrication requirement and so greater rate of wear and tear in two stroke. Because of one power stroke in two revolutions lesser cooling and lubrication requirements and so lesser rate of wear and tear in four stroke.
8. Lower thermal efficiency and part load efficiency is lesser than four-stroke engine.