Piston Encyclopedia Article

Piston

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Piston

A piston is a device that is forced up and down within a cylinder, creating motion in engines and other similar mechanisms.

The use of pistons can be traced to the first century A.D., when Greek engineers developed pneumatic tools (utilizing compressed air) containing pistons. Later, around 1650, Otto von Guericke built an air pump that utilized a piston.

Dutch scientist Christiaan Huygens built a dangerous gunpowder engine around 1680 that used the power from an explosion to drive a piston through a cylinder. Huygens's assistant, French physicist Denis Papin, suggested that the condensation of steam would create a vacuum in a cylinder into which a piston could be drawn, and in 1690 he built an engine based on this concept. Huygens and Papin were among the earliest contributors to the eventual development of an internal combustion engine.

Of course, it is within the internal combustion engine that the piston was put to its most practical use. The piston slides up within the cylinder to compress fuel vapor. When this is ignited, it explodes and drives the piston down, creating usable power. In any of these piston engines, the reciprocating power of the piston is converted into rotary power through the use of the connecting rod and crankshaft. This internal combustion engine process is the same whether the engine is fueled by gasoline, diesel fuel, or some other combustible fuel.