

# Gap Fill - Steam Engines

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Choose the right verb from the following to complete the text - make sure that the words are in the correct form.

apply	cause	release	push (x2)	travel	condense
admit	force	complete	improve	patent	escape
utilise	expand	describe			

Steam engines, believe it or not, have been around for over 300 years. In England in 1698, Thomas Savery \_\_\_\_\_ the first working steam engine - it was a simple machine that \_\_\_\_\_ the vacuum created when steam \_\_\_\_\_. In 1712 Thomas Newcomen built an engine that made use of a piston, and, beginning in 1769, James Watt \_\_\_\_\_ on steam engine design with a string of patents that included innovations such as having steam \_\_\_\_\_ alternatively on both sides of a piston.

The modern steam engine came to be in 1802 with the advent of high-pressure steam engines, like all of the engines just \_\_\_\_\_, a reciprocating engine.

A steam engine utilises the energy contained in steam under high pressure. The energy that is \_\_\_\_\_ when steam \_\_\_\_\_ produces rotary motion. The steam from the boiler is \_\_\_\_\_ into the cylinder in which there is a piston and in which the steam expands, \_\_\_\_\_ the piston to move (Fig.1a). When the piston has travelled to the end of the cylinder and thus \_\_\_\_\_ its stroke (Fig. 1b), the now expanded steam is allowed to \_\_\_\_\_ from the cylinder.

At the same time the steam is changed over, live steam under pressure being admitted to the other side of the piston, causing the latter to \_\_\_\_\_ back, past its starting point (Fig. 1c), until it has reached the other end of its stroke (Fig. 1d). The force of the steam is \_\_\_\_\_ alternately on two sides of the piston. While the piston is being \_\_\_\_\_ in one direction by the expanding steam, the spent steam is \_\_\_\_\_ out of the machine on the other side of the piston.