

Cause and Effect: Pistons and Valves III

Choose the correct option

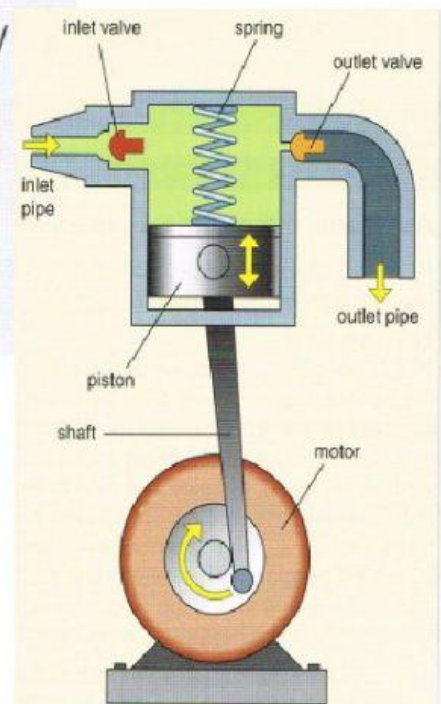
PISTON PUMPS

Piston pumps can pump any fluid. This one pumps water. The pump has a motor, a shaft, a piston, a spring and two valves. The valve on the right is the outlet valve. The valve on the left is the inlet valve.

This is how it works. The motor makes the shaft (1 move/to move) in and out. The shaft makes the piston (2 move/to move) in and out. Let us look at the two movements of the piston.

1 The piston moves in. This causes the water pressure (3 increase/to increase). The high pressure forces the outlet valve (4 open/to open). The open valve allows the fluid (5 flow/to flow) out of the pump through the outlet pipe. At the same time, the high pressure makes the inlet valve (6 close/to close). This closed valve prevents the fluid (7 to flow/from flowing) back through the inlet pipe.

2 The piston moves out. This makes the water pressure (8 decrease/to decrease). The low pressure forces the inlet valve (9 open/to open). The open inlet valve lets fluid (10 flow/to flow) into the pump through the inlet valve. At the same time, the low pressure makes the outlet valve (11 close/to close). This closed valve stops the fluid (12 to flow/from flowing) back into the pump through the outlet pipe.



2 Rewrite these sentences to give similar meanings. Replace the verbs in italics with the correct form of the verbs in brackets.

1 The pump *makes* the water flow along the pipes. (cause)

The pump causes _____

2 The valves *allow* air to enter the tyres. (let)

3 The valves *don't let* air escape from the tyres. (prevent)

4 The sun *causes* the solar panel to heat the water. (make)

5 The cooling system *doesn't allow* the engine to get very hot. (stop)

6 The closed inlet valve *prevents* the water from flowing out. (not allow)
