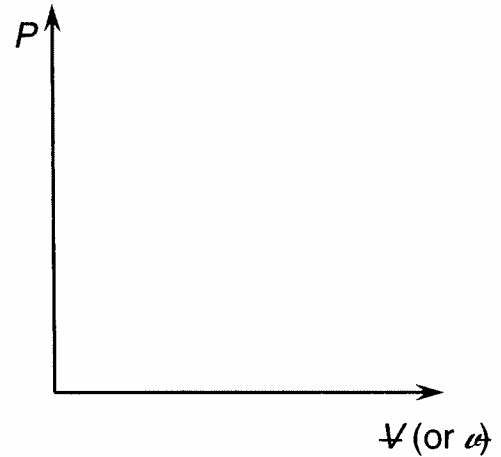
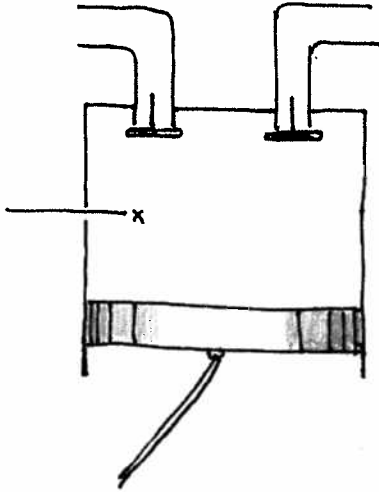


Consider the piston cylinder in your car. Let's consider what *really* happens as it is operating.



Let's analyze it! But first, some assumptions...



Air Standard Assumptions

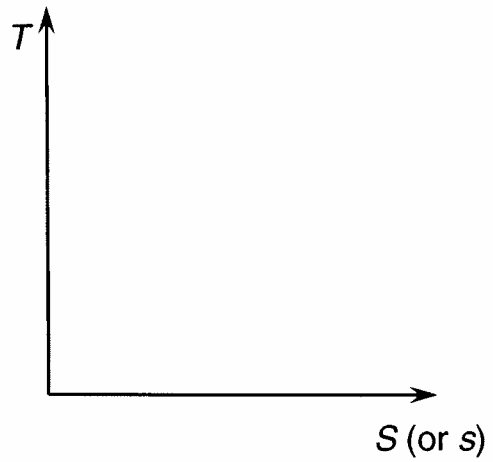
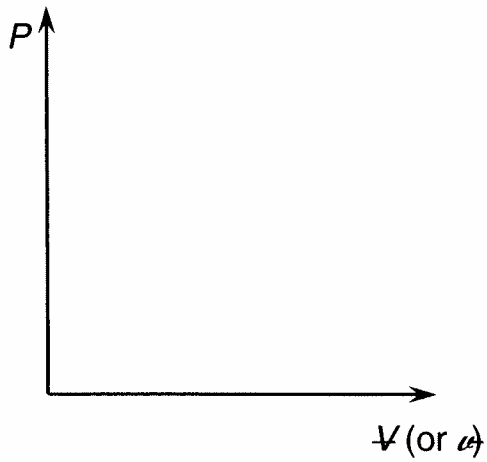
1. Working fluid is _____
2. and it behaves as an _____.
3. The system is _____. (We are ignoring intake and exhaust strokes.)
4. Combustion is modeled as an _____.
5. All processes are _____.

Cold Air Standard Assumptions

Same as air standard assumptions with

Our best first guess at this cycle using these assumptions is the

Otto Cycle



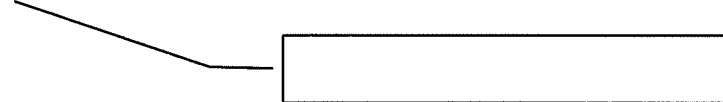
Some other definitions:

$$r_c = \quad / \quad = \underline{\hspace{2cm}}$$

$$\Delta V = \underline{\hspace{2cm}}$$

$$V_{min} = \underline{\hspace{2cm}}$$

$$(MEP) \cdot \Delta V =$$



Cold air standard	Air standard