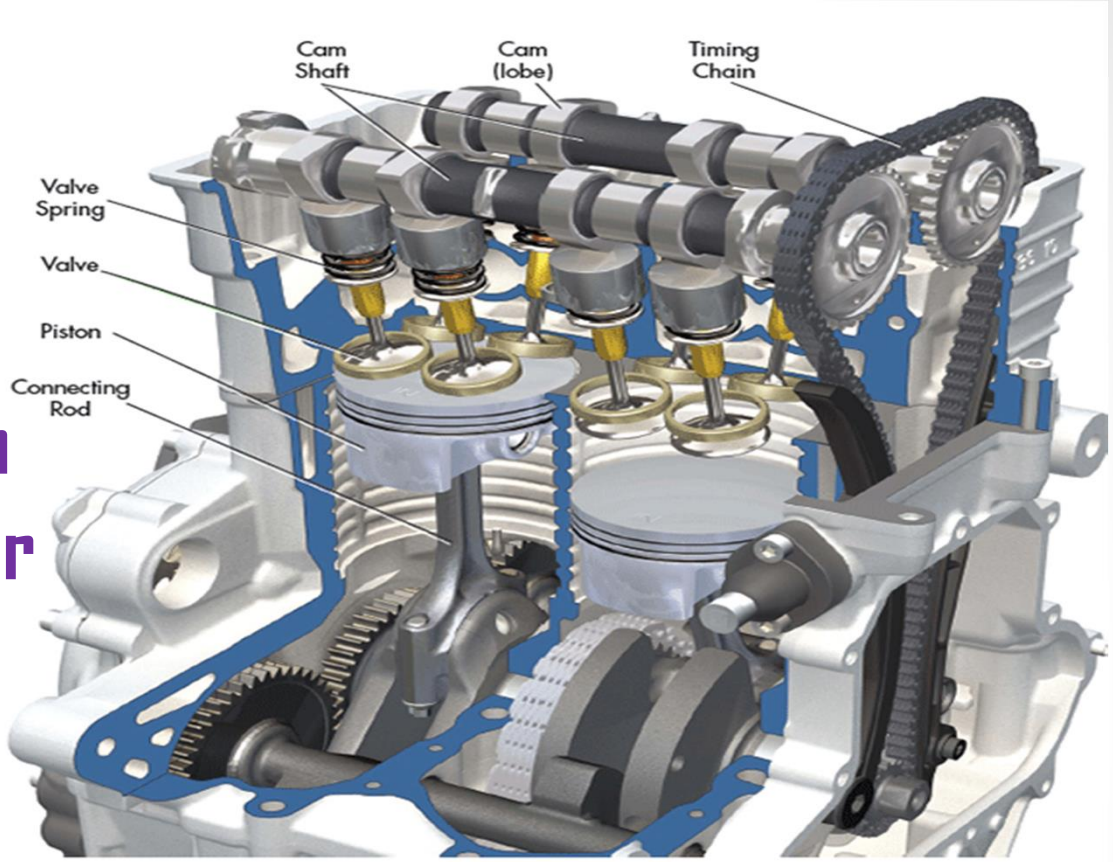
I C Engine, Steam & Nuclear Power



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In CI Engine as soon as fuel is injection to chamber it is vaporized and mixed with air and ~~Time~~ fuel burn automatically and Time consumed in this is known as chemical delay.

Knocking occur in SI Engine after the combustion
Knocking occur in CI Engine beginning of combustion
uncontrol combustion → the uncontrol (Period of Rapid Combustion) combustion is also known as rapid combustion.

during delay period more amount of fuel droplets comes out from the injector and group of droplets burn together in the chamber this produced uncontrolled combustion known as Knocking.

after some time the temp of combustion chamber is so high. then as soon as the droplets of fuel Entre in the combustion chamber it burns instantaniously, this is called control combustion.

As a diesel is less volatile, there are some pockets of air fuel mixture which burn during Expension stroke is called as after burning.

The fector which control detonation in SI Engine increased detonation in CI Engine. and hence good SI Engine fuel is a bad CI Engine fuel.

Factor controlling of detonation for CIE

	CI	SI
Self ignition temp	Low	High
Delay Period	Low	High
Compression ratio	High	Low
Inlet temp	High	Low
Inlet Pressure	High	Low
Combustion Wall temp,	High.	Low.
Speed (rpm)	Low	High
cylinder size	Large	Small.

Reference

- **Text Books**
- ***V Ganeshan – IC Engine, Sharma & Mathur – IC Engine***
- ***R.K. Rajput– Power Plant Engineering***