**Summary**

An **internal combustion engine** is a [heat engine](https://en.wikipedia.org/wiki/Heat_engine) where the [combustion](https://en.wikipedia.org/wiki/Combustion) of a [fuel](https://en.wikipedia.org/wiki/Fuel) occurs with an air in a [combustion chamber](https://en.wikipedia.org/wiki/Combustion_chamber) that is a part of the [working fluid](https://en.wikipedia.org/wiki/Working_fluid) flow. In an internal combustion engine, the expansion of the high-[temperature](https://en.wikipedia.org/wiki/Temperature) and high-[pressure](https://en.wikipedia.org/wiki/Pressure) gases produced by combustion applies [force](https://en.wikipedia.org/wiki/Force) to piston. This force moves piston over a distance, transforming [chemical energy](https://en.wikipedia.org/wiki/Chemical_energy) into useful [mechanical energy](https://en.wikipedia.org/wiki/Mechanical_energy).

The first modern internal combustion engine was created in 1876 by [Nikolaus Otto](https://en.wikipedia.org/wiki/Nikolaus_Otto) that’s way the internal combustion engine operated with petrol fuel is also called Otto engine.

Typically an internal combustion engine is fed with fossil fuels like [natural gas](https://en.wikipedia.org/wiki/Natural_gas) or [petroleum](https://en.wikipedia.org/wiki/Petroleum) products such as [gasoline](https://en.wikipedia.org/wiki/Gasoline), [diesel fuel](https://en.wikipedia.org/wiki/Diesel_fuel) or [fuel oil](https://en.wikipedia.org/wiki/Fuel_oil). Also there is usage of [renewable fuels](https://en.wikipedia.org/wiki/Renewable_fuels) like [biodiesel](https://en.wikipedia.org/wiki/Biodiesel) for compression ignition engines and [bioethanol](https://en.wikipedia.org/wiki/Ethanol_fuel), [methanol](https://en.wikipedia.org/wiki/Methanol_fuel) or hydrogen for spark ignition engines.

In my opinion, the engine is the most complex car’s unit, it’s also the most difficult to design an agregate in the whole car I think because an engineer needs to know everything about engine sizes and types, possibility of fuel usage and exhaust emissions. They must also be familiar with engineering disciplines such as mechanics, heat engineering, electrical engineering and traffic safety.

**My glossary**

1. Bottom-dead-center - zemākais maiņas punkts,
2. Camshaft - sadales vārpsta,
3. Cargo ships - kravas kuģi,
4. Combustion - sadedze,
5. Compression - saspiede,
6. Crankshaft - kloķvārpsta,
7. Exhaust - izplūde,
8. Exhaust emissions - izplūdes gāzu normas,
9. External combustion engine - ārdedzes dzinējs,
10. Hydrogen - ūdeņradis,
11. Intake - ieplūde,
12. Internal combustion engine - iekšdedzes dzinējs,
13. Piston - virzulis,
14. Steam engine - tvaika dzinējs,
15. Stroke - takts,
16. Top-dead-center - augstākais maiņas punkts,
17. Valve - vārsts

1st year Automotive engineering student

Audars Karlis Klints