

Forklift Engines

Forklift Engine - An engine, also referred to as a motor, is a device which changes energy into useful mechanical motion. Motors that change heat energy into motion are known as engines. Engines are available in many types such as internal and external combustion. An internal combustion engine usually burns a fuel using air and the resulting hot gases are utilized for generating power. Steam engines are an illustration of external combustion engines. They utilize heat in order to generate motion making use of a separate working fluid.

The electric motor takes electrical energy and generates mechanical motion via various electromagnetic fields. This is a common type of motor. Some kinds of motors function by non-combustive chemical reactions, other kinds could utilize springs and function through elastic energy. Pneumatic motors function by compressed air. There are different designs depending upon the application required.

ICEs or Internal combustion engines

An ICE takes place whenever the combustion of fuel combines with an oxidizer in a combustion chamber. Inside an internal combustion engine, the expansion of high pressure gases mixed along with high temperatures results in making use of direct force to some engine parts, for instance, turbine blades, nozzles or pistons. This particular force produces useful mechanical energy by way of moving the component over a distance. Usually, an internal combustion engine has intermittent combustion as seen in the popular 2- and 4-stroke piston motors and the Wankel rotating motor. Most rocket engines, jet engines and gas turbines fall into a second class of internal combustion engines known as continuous combustion, which occurs on the same previous principal described.

Stirling external combustion engines or steam engines greatly differ from internal combustion engines. The external combustion engine, where energy is to be delivered to a working fluid such as liquid sodium, pressurized water, hot water or air that is heated in a boiler of some type. The working fluid is not combined with, consisting of or contaminated by combustion products.

A variety of designs of ICEs have been developed and are now available with various weaknesses and strengths. If powered by an energy dense gas, the internal combustion engine provides an efficient power-to-weight ratio. Though ICEs have been successful in various stationary applications, their real strength lies in mobile applications. Internal combustion engines dominate the power supply intended for vehicles like for example boats, aircrafts and cars. A few hand-held power tools utilize either ICE or battery power gadgets.

External combustion engines

An external combustion engine is comprised of a heat engine where a working fluid, like for example steam in steam engine or gas in a Stirling engine, is heated through combustion of an external source. This combustion takes place via a heat exchanger or through the engine wall. The fluid expands and acts upon the engine mechanism which produces motion. Afterwards, the fluid is cooled, and either compressed and used again or disposed, and cool fluid is pulled in.

Burning fuel together with the aid of an oxidizer in order to supply the heat is called "combustion." External thermal engines can be of similar operation and configuration but utilize a heat supply from sources like for example exothermic, geothermal, solar or nuclear reactions not involving combustion.

Working fluid can be of whatever composition, although gas is the most common working fluid. Every so often a single-phase liquid is sometimes used. In Organic Rankine Cycle or in the case of the steam engine, the working fluid changes phases between liquid and gas.