

Engines for Forklifts

Forklift Engine - An engine, also referred to as a motor, is a tool which changes energy into useful mechanical motion. Motors which transform heat energy into motion are called engines. Engines come in many types like for example external and internal combustion. An internal combustion engine typically burns a fuel along with air and the resulting hot gases are used for generating power. Steam engines are an example of external combustion engines. They utilize heat to produce motion together with a separate working fluid.

In order to create a mechanical motion through various electromagnetic fields, the electric motor has to take and produce electrical energy. This kind of engine is extremely common. Other types of engine could be driven making use of non-combustive chemical reactions and some would use springs and be driven by elastic energy. Pneumatic motors function through compressed air. There are different styles depending upon the application needed.

ICEs or Internal combustion engines

Internal combustion happens when the combustion of the fuel combines together with an oxidizer in the combustion chamber. Inside the IC engine, higher temperatures would result in direct force to certain engine parts like the turbine blades, nozzles or pistons. This particular force generates functional mechanical energy by way of moving the part over a distance. Normally, an ICE has intermittent combustion as seen in the popular 2- and 4-stroke piston motors and the Wankel rotating motor. The majority of rocket engines, jet engines and gas turbines fall into a second class of internal combustion motors called continuous combustion, which occurs on the same previous principal described.

External combustion engines like steam or Sterling engines vary significantly from internal combustion engines. External combustion engines, wherein the energy is delivered to a working fluid like for example liquid sodium, hot water and pressurized water or air that are heated in some kind of boiler. The working fluid is not combined with, having or contaminated by combustion products.

A variety of designs of ICEs have been developed and placed on the market with various weaknesses and strengths. If powered by an energy dense fuel, the internal combustion engine produces an effective power-to-weight ratio. Though ICEs have succeeded in several stationary applications, their actual strength lies in mobile applications. Internal combustion engines control the power supply for vehicles like for instance cars, boats and aircrafts. Several hand-held power tools use either ICE or battery power equipments.

External combustion engines

An external combustion engine is comprised of a heat engine where a working fluid, such as steam in steam engine or gas in a Stirling engine, is heated through combustion of an external source. This particular combustion happens through a heat exchanger or through the engine wall. The fluid expands and acts upon the engine mechanism that generates motion. Then, the fluid is cooled, and either compressed and reused or thrown, and cool fluid is pulled in.

The act of burning fuel with an oxidizer to be able to supply heat is referred to as "combustion." External thermal engines could be of similar operation and configuration but use a heat supply from sources like for instance geothermal, solar, nuclear or exothermic reactions not involving combustion.

The working fluid could be of any constitution. Gas is actually the most common kind of working fluid, yet single-phase liquid is sometimes used. In Organic Rankine Cycle or in the case of the steam engine, the working fluid varies phases between liquid and gas.