

Engine for Forklifts

Forklift Engine - An engine, likewise known as a motor, is a tool which transforms energy into useful mechanical motion. Motors which change heat energy into motion are known as engines. Engines are available in several kinds such as external and internal combustion. An internal combustion engine normally burns a fuel together with air and the resulting hot gases are utilized for generating power. Steam engines are an example of external combustion engines. They use heat so as to produce motion together with a separate working fluid.

The electrical motor takes electrical energy and produces mechanical motion via various electromagnetic fields. This is a typical type of motor. Several types of motors function through non-combustive chemical reactions, other kinds can use springs and function through elastic energy. Pneumatic motors are driven by compressed air. There are different designs depending on the application required.

Internal combustion engines or ICEs

An ICE happens when the combustion of fuel mixes with an oxidizer in a combustion chamber. Inside an internal combustion engine, the expansion of high pressure gases mixed together with high temperatures results in applying direct force to some engine parts, for example, nozzles, pistons or turbine blades. This force produces useful mechanical energy by 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 rotary motor. Nearly all rocket engines, jet engines and gas turbines fall into a second class of internal combustion motors called continuous combustion, which takes place on the same previous principal described.

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

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

External combustion engines

An external combustion engine uses a heat engine where a working fluid, like for instance steam in steam engine or gas in a Stirling engine, is heated by combustion of an external source. This particular combustion takes place via a heat exchanger or via 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 to supply the heat is referred to as "combustion." External thermal engines can be of similar use 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 whichever composition, although gas is the most common working fluid. At times 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.