

Engines for Forklift

Forklift Engine - An engine, otherwise called a motor, is a device that converts energy into functional mechanical motion. Motors which convert heat energy into motion are known as engines. Engines are available in many kinds like for example internal and external combustion. An internal combustion engine usually burns a fuel making use of air and the resulting hot gases are used for creating power. Steam engines are an example of external combustion engines. They use heat to produce motion along with a separate working fluid.

The electric motor takes electrical energy and generates mechanical motion through varying electromagnetic fields. This is a typical type of motor. Various kinds of motors function by non-combustive chemical reactions, other types can make use of springs and function by elastic energy. Pneumatic motors function by compressed air. There are different styles depending on the application required.

Internal combustion engines or ICEs

Internal combustion happens whenever the combustion of the fuel mixes with an oxidizer in the combustion chamber. In the IC engine, higher temperatures will result in direct force to certain engine components such as the turbine blades, nozzles or pistons. This force generates useful mechanical energy by way of moving the component over a distance. Typically, an ICE has intermittent combustion as seen in the popular 2- and 4-stroke piston engines and the Wankel rotating motor. Most jet engines, gas turbines and rocket engines fall into a second class of internal combustion motors referred to as continuous combustion, that takes place on the same previous principal described.

Steam engines or Stirling external combustion engines very much vary 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 kind. The working fluid is not combined with, consisting of or contaminated by combustion products.

Different designs of ICEs have been developed and are now available together with numerous strengths and weaknesses. When powered by an energy dense gas, the internal combustion engine produces an efficient power-to-weight ratio. Although ICEs have been successful in several stationary applications, their actual strength lies in mobile applications. Internal combustion engines dominate the power supply utilized for vehicles like for example cars, boats and aircrafts. Several hand-held power tools utilize either battery power or ICE devices.

External combustion engines

In the external combustion engine is made up of a heat engine working with a working fluid like for instance gas or steam that is heated through an external source. The combustion will take place through the engine wall or via a heat exchanger. The fluid expands and acts upon the engine mechanism which generates motion. Then, the fluid is cooled, and either compressed and used again or discarded, and cool fluid is pulled in.

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

The working fluid can be of any composition. Gas is actually the most common type 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 adjusts phases between gas and liquid.