Forklift Alternators

Forklift Alternators - A device utilized in order to change mechanical energy into electrical energy is known as an alternator. It can carry out this function in the form of an electric current. An AC electric generator could basically be termed an alternator. However, the word is normally used to refer to a rotating, small device powered by internal combustion engines. Alternators that are located in power stations and are driven by steam turbines are referred to as turbo-alternators. Nearly all of these devices utilize a rotating magnetic field but from time to time linear alternators are likewise utilized.

A current is induced inside the conductor when the magnetic field all-around the conductor changes. Usually the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are situated on an iron core known as the stator. When the field cuts across the conductors, an induced electromagnetic field also called EMF is generated as the mechanical input causes the rotor to turn. This rotating magnetic field generates an AC voltage in the stator windings. Usually, there are 3 sets of stator windings. These physically offset so that the rotating magnetic field produces 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these utilize brushes and slip rings with a rotor winding or a permanent magnet so as to induce a magnetic field of current. Brushlees AC generators are usually located in bigger devices like for instance industrial sized lifting equipment. A rotor magnetic field may be produced by a stationary field winding with moving poles in the rotor. Automotive alternators usually utilize a rotor winding that allows control of the voltage generated by the alternator. This is done by changing the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current in the rotor. These devices are limited in size due to the price of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.