## Forklift Alternator

Forklift Alternators - A device utilized to convert mechanical energy into electrical energy is actually called an alternator. It can perform this function in the form of an electrical current. An AC electrical generator can in principal likewise be called an alternator. Nonetheless, the word is normally utilized to refer to a small, rotating device powered by internal combustion engines. Alternators that are placed in power stations and are powered by steam turbines are referred to as turbo-alternators. The majority of these devices make use of a rotating magnetic field but occasionally linear alternators are also used.

A current is induced in the conductor when the magnetic field around the conductor changes. Usually the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are located on an iron core known as the stator. If the field cuts across the conductors, an induced electromagnetic field likewise called EMF is produced as the mechanical input causes the rotor to turn. This rotating magnetic field generates an AC voltage in the stator windings. Typically, 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 use brushes and slip rings along with a rotor winding or a permanent magnet in order to induce a magnetic field of current. Brushlees AC generators are normally located in larger machines such as industrial sized lifting equipment. A rotor magnetic field may be produced by a stationary field winding with moving poles in the rotor. Automotive alternators often use a rotor winding that allows control of the voltage induced by the alternator. This is done by varying the current in the rotor field winding. Permanent magnet machines avoid the loss due to the magnetizing current within the rotor. These devices are limited in size due to the cost of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.