## Forklift Alternator

Forklift Alternators - A device used so as to change mechanical energy into electric energy is actually called an alternator. It can carry out this function in the form of an electrical current. An AC electric generator can in essence likewise be termed an alternator. However, the word is usually used to refer to a small, rotating machine driven by internal combustion engines. Alternators that are located in power stations and are powered by steam turbines are actually known as turbo-alternators. The majority of these devices use a rotating magnetic field but every so often linear alternators are utilized.

Whenever the magnetic field all-around a conductor changes, a current is induced within the conductor and this is how alternators generate their electrical energy. Often the rotor, which is actually a rotating magnet, turns within a stationary set of conductors wound in coils situated on an iron core which is actually known as the stator. Whenever the field cuts across the conductors, an induced electromagnetic field also called EMF is produced as the mechanical input makes the rotor to revolve. 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 induces 3 phase currents, displaced by one-third of a period with respect to each other.

In a "brushless" alternator, the rotor magnetic field can be caused by production of a permanent magnet or by a rotor winding energized with direct current through slip rings and brushes. Brushless AC generators are normally located in bigger devices as opposed to those utilized in automotive applications. A rotor magnetic field can 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 generated by the alternator. This is done by changing the current in the rotor field winding. Permanent magnet machines avoid the loss due to the magnetizing current within the rotor. These machines are limited in size because of the cost of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.