## Forklift Alternator

Forklift Alternators - An alternator is actually a device that transforms mechanical energy into electric energy. This is done in the form of an electric current. In essence, an AC electric generator could also be labeled an alternator. The word usually refers to a small, rotating device driven by automotive and various internal combustion engines. Alternators that are placed in power stations and are driven by steam turbines are known 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 within the conductor if the magnetic field around the conductor changes. Generally 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 produced as the mechanical input causes the rotor to revolve. This rotating magnetic field generates an AC voltage in the stator windings. Normally, there are 3 sets of stator windings. These physically offset so that the rotating magnetic field generates 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these utilize slip rings and brushes with a rotor winding or a permanent magnet in order to produce a magnetic field of current. Brushlees AC generators are most often found in larger machines like for instance industrial sized lifting equipment. A rotor magnetic field may be induced 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 varying the current in the rotor field winding. Permanent magnet devices avoid the loss because of the magnetizing current within the rotor. These devices are restricted 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.