## Forklift Alternators

Forklift Alternator - An alternator is a machine that changes mechanical energy into electric energy. This is done in the form of an electric current. In essence, an AC electrical generator could be labeled an alternator. The word typically refers to a rotating, small device driven by automotive and different internal combustion engines. Alternators that are located in power stations and are powered by steam turbines are referred to as turbo-alternators. The majority of these devices use a rotating magnetic field but at times linear alternators are likewise used.

A current is produced inside the conductor if the magnetic field around the conductor changes. Normally the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are situated on an iron core referred to as the stator. Whenever the field cuts across the conductors, an induced electromagnetic field also 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 induces 3 phase currents, displaced by one-third of a period with respect to each other.

In a "brushless" alternator, the rotor magnetic field may be caused by production of a lasting magnet or by a rotor winding energized with direct current through brushes and slip rings. Brushless AC generators are usually found in bigger devices compared to those used in automotive applications. A rotor magnetic field may be generated by a stationary field winding with moving poles in the rotor. Automotive alternators often make use of a rotor winding that allows control of the voltage generated by the alternator. It does this by changing the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current within the rotor. These devices are restricted in size due to the cost of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.