

## Forklift Alternators

Forklift Alternator - An alternator is actually a device which transforms mechanical energy into electrical energy. It does this in the form of an electric current. In principal, an AC electrical generator can likewise be referred to as an alternator. The word usually refers to a rotating, small machine driven by automotive and different internal combustion engines. Alternators which are located in power stations and are driven by steam turbines are referred to as turbo-alternators. Most of these devices use a rotating magnetic field but sometimes linear alternators are also utilized.

A current is induced inside 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 located on an iron core known as the stator. If the field cuts across the conductors, an induced electromagnetic field otherwise called EMF is generated as the mechanical input makes 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 induction of a lasting magnet or by a rotor winding energized with direct current through slip rings and brushes. Brushless AC generators are usually found in larger machines 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 normally use a rotor winding which allows control of the voltage produced 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 inside the rotor. These devices are restricted in size due to the price of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.