

## Forklift Alternator

Forklift Alternators - An alternator is a machine which transforms mechanical energy into electric energy. It does this in the form of an electric current. In essence, an AC electrical generator can likewise be referred to as an alternator. The word normally refers to a rotating, small device powered by automotive and different internal combustion engines. Alternators which are located in power stations and are powered by steam turbines are actually known as turbo-alternators. Most of these machines utilize a rotating magnetic field but occasionally linear alternators are 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 located on an iron core called the stator. When the field cuts across the conductors, an induced electromagnetic field also 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. Usually, 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 with a rotor winding or a permanent magnet to generate a magnetic field of current. Brushless AC generators are usually found in bigger devices like for example industrial sized lifting equipment. A rotor magnetic field can be induced by a stationary field winding with moving poles in the rotor. Automotive alternators often utilize a rotor winding which 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 machines 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.