

## Alternator for Forklift

Alternator for Forklift - An alternator is a machine that transforms mechanical energy into electrical energy. This is done in the form of an electrical current. In essence, an AC electric generator can be called an alternator. The word normally refers to a small, rotating device powered by automotive and various internal combustion engines. Alternators which are situated in power stations and are driven by steam turbines are actually called turbo-alternators. Nearly all of these devices make use of a rotating magnetic field but occasionally linear alternators are likewise used.

A current is induced in the conductor when the magnetic field surrounding 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 known as the stator. When the field cuts across the conductors, an induced electromagnetic field or EMF is produced as the mechanical input makes the rotor to revolve. This rotating magnetic field produces an AC voltage in the stator windings. Usually, there are 3 sets of stator windings. These are 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 make use of slip rings and brushes together with a rotor winding or a permanent magnet so as to induce a magnetic field of current. Brushless AC generators are most often located in larger machines like for instance industrial sized lifting equipment. A rotor magnetic field could be produced by a stationary field winding with moving poles in the rotor. Automotive alternators usually utilize a rotor winding that allows control of the voltage produced 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 inside the rotor. These devices 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.