

## Alternator for Forklift

Forklift Alternators - An alternator is a device that changes mechanical energy into electrical energy. This is done in the form of an electric current. In principal, an AC electric generator can be referred to as an alternator. The word typically refers to a rotating, small machine driven by automotive and other internal combustion engines. Alternators that are located in power stations and are driven by steam turbines are actually referred to as turbo-alternators. Most of these machines use a rotating magnetic field but at times linear alternators are likewise utilized.

Whenever the magnetic field around a conductor changes, a current is produced within the conductor and this is actually the way alternators produce their electrical energy. Often the rotor, which is actually a rotating magnet, revolves within a stationary set of conductors wound in coils located on an iron core which is known as the stator. When the field cuts across the conductors, an induced electromagnetic field also called EMF is generated 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 induce a magnetic field of current. Brushless AC generators are most often located in larger devices like industrial sized lifting equipment. A rotor magnetic field could 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 induced by the alternator. It does this by varying the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current in the rotor. These machines 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.