

## Alternator for Forklift

Forklift Alternators - A machine utilized in order to change mechanical energy into electric energy is actually known as an alternator. It could perform this function in the form of an electric current. An AC electrical generator can in principal likewise be called an alternator. Nonetheless, the word is normally used to refer to a rotating, small device powered by internal combustion engines. Alternators which are located in power stations and are driven by steam turbines are actually known as turbo-alternators. Most of these devices use a rotating magnetic field but occasionally linear alternators are used.

If the magnetic field surrounding a conductor changes, a current is generated inside the conductor and this is the way alternators generate their electrical energy. Normally the rotor, which is actually a rotating magnet, revolves within a stationary set of conductors wound in coils situated on an iron core which is actually called the stator. When the field cuts across the conductors, an induced electromagnetic field otherwise 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. Normally, 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 could be made by induction of a permanent magnet or by a rotor winding energized with direct current through brushes and slip rings. Brushless AC generators are normally found in bigger devices compared to those utilized in automotive applications. 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 that allows control of the voltage generated by the alternator. This is done 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 limited 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.