

## Alternator for Forklift

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

If the magnetic field all-around a conductor changes, a current is induced inside the conductor and this is the way alternators produce their electrical energy. Often the rotor, which is a rotating magnet, turns within a stationary set of conductors wound in coils located on an iron core which is actually referred to as the stator. Whenever the field cuts across the conductors, an induced electromagnetic field likewise called EMF is generated as the mechanical input causes 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 generates 3 phase currents, displaced by one-third of a period with respect to each other.

In a "brushless" alternator, the rotor magnetic field can be caused by induction of a lasting magnet or by a rotor winding energized with direct current through brushes and slip rings. Brushless AC generators are usually found in larger machines compared to those used in automotive applications. 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 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 because of the magnetizing current in the rotor. These machines are limited in size because of the price of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.