

## Alternator for Forklift

Forklift Alternators - An alternator is actually a device which transforms mechanical energy into electric energy. It does this in the form of an electrical current. Basically, an AC electric generator can also be labeled an alternator. The word typically refers to a small, rotating machine driven by automotive and different internal combustion engines. Alternators that are situated in power stations and are driven by steam turbines are actually known as turbo-alternators. The majority of these devices utilize a rotating magnetic field but occasionally linear alternators are also utilized.

If the magnetic field around a conductor changes, a current is induced in the conductor and this is the way alternators produce their electrical energy. Normally the rotor, which is a rotating magnet, revolves within a stationary set of conductors wound in coils located on an iron core which is referred to as the stator. If 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 physically offset so that the rotating magnetic field induces 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these utilize slip rings and brushes together with a rotor winding or a permanent magnet to be able to produce a magnetic field of current. Brushless AC generators are usually found in larger devices like for instance industrial sized lifting equipment. A rotor magnetic field can be generated by a stationary field winding with moving poles in the rotor. Automotive alternators usually use a rotor winding which allows control of the voltage generated 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 limited in size because of the cost of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.