

## Alternator for Forklift

Forklift Alternators - An alternator is a device that converts mechanical energy into electrical energy. This is done in the form of an electrical current. In essence, an AC electric generator can likewise be labeled an alternator. The word normally refers to a rotating, small device driven by automotive and other internal combustion engines. Alternators that are located in power stations and are driven by steam turbines are actually known as turbo-alternators. Nearly all of these machines use a rotating magnetic field but every so often linear alternators are also utilized.

If the magnetic field around a conductor changes, a current is produced in the conductor and this is actually how alternators generate their electricity. Often the rotor, which is actually 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. When the field cuts across the conductors, an induced electromagnetic field otherwise called EMF is produced as the mechanical input makes the rotor to turn. This rotating magnetic field produces an AC voltage in the stator windings. Normally, there are 3 sets of stator windings. These are 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 may be made by production of a lasting magnet or by a rotor winding energized with direct current through slip rings and brushes. Brushless AC generators are usually found in bigger devices as opposed to those used in automotive applications. A rotor magnetic field could be produced by a stationary field winding with moving poles in the rotor. Automotive alternators normally utilize a rotor winding that allows control of the voltage generated by the alternator. It does this by varying the current in the rotor field winding. Permanent magnet machines avoid the loss because of the magnetizing current within the rotor. These devices are restricted in size due to the cost of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.