

## Alternator for Forklift

Alternator for Forklift - An alternator is actually a device which changes mechanical energy into electrical energy. It does this in the form of an electric current. In principal, an AC electric generator could also be labeled an alternator. The word typically refers to a small, rotating machine powered by automotive and other internal combustion engines. Alternators that are placed in power stations and are driven by steam turbines are known as turbo-alternators. Nearly all of these machines utilize a rotating magnetic field but from time to time linear alternators are likewise used.

A current is produced inside the conductor if the magnetic field around the conductor changes. Normally the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are located on an iron core called the stator. If the field cuts across the conductors, an induced electromagnetic field likewise called EMF is produced as the mechanical input causes 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 physically offset so that the rotating magnetic field produces 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 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 bigger machines as opposed 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 make use of 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 due to the magnetizing current inside the rotor. These devices are limited in size due to the cost of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.