

## Forklift Alternator

Forklift Alternator - An alternator is a device that changes mechanical energy into electric energy. This is done in the form of an electrical current. In essence, an AC electric generator can likewise be called an alternator. The word usually refers to a rotating, small device powered by automotive and various internal combustion engines. Alternators which are situated in power stations and are driven by steam turbines are actually referred to as turbo-alternators. Nearly all of these machines make use of a rotating magnetic field but every now and then linear alternators are utilized.

When the magnetic field all-around a conductor changes, a current is produced within the conductor and this is actually the way alternators produce their electricity. Usually the rotor, which is a rotating magnet, revolves within a stationary set of conductors wound in coils situated on an iron core which is actually referred to as the stator. Whenever 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 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.

"Brushless" alternators - these utilize brushes and slip rings together with a rotor winding or a permanent magnet so as to generate a magnetic field of current. Brushless AC generators are normally located in larger devices like industrial sized lifting equipment. A rotor magnetic field can be generated by a stationary field winding with moving poles in the rotor. Automotive alternators normally make use of a rotor winding that allows control of the voltage induced 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 because of the price of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.